# Life in the Country.—Winter Enjoyments.

ONE of the favorite authors of English literature has described the pleasures of country life somewhat after this charming fashion: "Let the house be a cottage, embowered with flowering shrubs, so chosen as to unfold a succession of flowers upon the walls, and clustering around the windows through all the months of spring, summer, and autumn—beginning, in fact, with May roses, and ending with jasmine. Let it, however, not be spring, nor summer, nor autumn, but winter, in its sternest shape. This is a most important point in the science of happiness; and I am surprised to see people overlook it, as if it were actually matter of congratulation that winter is going, or, if coming, is not likely to be a severe one. On the contrary, I put up a petition, annually, for as much snow, hail, frost, or storm of one kind or another, as the skies can possibly afford. Surely, everybody is aware of the divine pleasures which attend a winter fireside: candles, warm hearth-rugs, tea, a fair tea maker, shutters closed, curtains flowing in ample draperies on the floor, whilst the wind and rain are raging audibly without,

> "And at the doors and windows seem to call,
> As heaven and earth they would together mell;
> Yet the least entrance find they none at all—
> Whence sweeter grows our rest secure in massy hall."
>
> *Castle of Indolence.*

"All these are items in the description of a winter evening, which must surely be familiar to everybody born in a cold latitude; and it is evident that most of these delicacies cannot be ripened without weather stormy or inclement in some way or other. You need not be particular whether it be snow, or frost, or wind so strong that (as some one has said) 'you may lean your back against it like a post.' Something of the sort I must have, and if I have it not, I think myself in a manner ill-used; for why am I called on to pay so heavily for winter in coals, candles, &c., if I am not to have the article good of its kind? No; a Canadian winter for my money, or a Russian one, where every man is but a co-proprietor with the north wind in the fee simple of his own ears."

There are many who will recognize the value of such scenes; for ourselves, we confess to its pleasures, but a little milder would be more to our taste. The whistling of southern breezes rushing up the valleys, and quickening with their warmth the early flower—the budding lilac and syringa—the opening leaf of the sturdy oak—awaken in our breast that balm to man's pilgrimage, the ever open-handed boon to our earthly thoughts, hope. In the cold winter, we are thrown altogether upon our own resources. In the spring time of year, all nature rejoices us as a companion; her florets gem every twig; each day brings new beauties, each month new fruits, that are better than candles, coal, and curtains. But yet, to us, born to the rigors of frost, and writing, as we are, in the midst of its biting, enjoyment is not cut off.

This is the time to study man, and to gain some little more insight into nature's workings; books of botany, and histories of birds, of insects, the growth, and the legends of trees, are resources for the winter evening. *A pursuit* of some kind most surely cheers the wintry night. Do our readers remember how thoroughly happy they have been when something was *going on* of a winter's evening, the family, may be, assembled round a blazing hearth, and all engaged in paring

apples? or constructing some rustic piece of furniture for the approaching spring? It is sufficient to produce the enjoyment our pleasing author has shadowed so well, that all hands should be employed in what interests the mind; something doing, something done, accomplished, time not thrown away, sends all hands happy to their rest.

In northern climes, where the days are shorter than in the more tropical regions, this species of comfort and pleasure is better known than in southern lands. The family makes preparation for the longer period of darkness, and assembles round a fire common to all. One perhaps reads while the others work, and from this period of their lives they produce the ornamental objects which embellish their home, or those numerous small wares which load down every vessel's deck that leaves an Eastern port. Such—either intellectual pursuits and pleasures, mechanical employments, or, better, both combined—should all aim at, who desire to hail another day with energy for renewed exertion, and in good humor with their fellow creatures.

## DOWNING'S EVER-BEARING MULBERRY.*

BY L. B.

This truly distinguished fruit, so different from the other American Mulberries by its rich, subacid taste, was obtained from the seed of the Multicaulis by our worthy and experienced pomologist, Chas. Downing, some twelve years ago, in his experimental grounds, near Newburgh. The tree is very vigorous, hardy, and productive. Its foliage is large and fine, making it altogether an ornamental as well as a very useful tree. It comes into bearing the third or fourth year, and the fruit increases in size as the tree attains a more mature condition. The fruit ripens in succession, from the 1st of July to the beginning of September, producing a never-failing crop of the most luscious fruit, highly valued by all who have had an opportunity to taste it, and making a fine dessert, and a most delicious pie or pudding fruit.

Size of the fruit from over one inch to one inch and a half in length—about half an inch in diameter; larger under good, rich cultivation. Color, purplish-black, with small, fine grains, of a delightful, rich, subacid taste. The outline of the leaf is that of a middle-sized one.

## THE DELAWARE GRAPE.

BY N. LONGWORTH, CINCINNATI, OHIO.

A root of the Delaware Grape was sent me about ten years since, by an intelligent citizen of Delaware, in this State, who informed me that it was brought there several years before by an emigrant from New Jersey, who stated that it had been there cultivated for many years by an emigrant from Europe, and from that circumstance deemed to be a foreign grape. When in bearing in my garden, all my German vine-dressers pronounced it the best German wine grape, the Traminer. As I have never found a foreign grape that would succeed in our soil and climate, I was doubtful if it could be of foreign origin. But if a native, it proved of less vigorous growth than any native grape that I have seen. I never kept but three or four vines, and the one sent me about ten years since has not increased in vigor of growth. It produces a wine of good, but not, as far as tested, of superior

* See Frontispiece.

quality. In one of my vineyards there are several vines, and some wine made from the grapes yearly. When first assured of its being the Traminer, I thought of planting it as a wine grape. From its delicate growth, had I done so, I should have planted it as vines are planted in vineyards in many parts of Europe—three feet between the rows, the plants in the rows two feet apart. The bunches and berries are small, but of superior quality as a table grape. I regret that I have not planted its seed, as I have a seedling of the Isabella Grape of fine quality, that, in the open ground, bears berries larger than the largest European grapes, even when raised under glass, and the bunches of large size. From the Delaware, a like improvement would probably occur. It will be our own fault if we do not, in a few years, equal, if not surpass, the best table and wine grapes of Europe, by planting the seed of our best native grapes, and not by following the advice of some wise European writers, who say "that if we wish to improve the quality of our pears and apples, we must not do it by planting the seed of our best fruit, but by commencing with the seed of the crab apple and the choke pear, and improve by degrees." This may have been a wise course in the days of Methuselah, when men lived a thousand years, but it is not suited to this period. A country that abounds in a thousand varieties of native grapes, should leave Europe in the background—where a native grape is never seen—both in table and wine grapes.

[The Delaware and Traminer are distinct grapes, and must not be confounded. It has been said that the demand for the former is met by some, not in possession of the Delaware, with Traminer. Purchasers should beware.—Ed.]

## HORTICULTURE, ETC., IN MISSOURI.

BY H. M. MYERS, BOONVILLE, MO.

Feeling a common interest with my brother *Horticulturist*, I have thought a few words from the far West might be of interest to your many readers, and, with your permission, I would occasionally give some notes on fruit culture from this State, believing it to be one of the best fruit countries in the United States. I have travelled and conversed with many persons in most of the States, and from my own observation, and from all the information I have, I come to the above conclusion. Now for my own actual experience. In the spring of 1844, I commenced my improvements; a place to live in, first. In the fall, planted my fruit-trees, and not a year has passed since but some new varieties, and those of the best I had, have been planted. In three years from the seed, my peach-trees averaged one bushel to the tree, and I had apples enough for family use, in the same time, from two years old grafts. I now have thirty acres in all the various fruits that grow in this climate, yielding me, after a bountiful supply for family and friends, a net profit of about two thousand dollars annually. My apple-trees will average (twelve years old), this year, twenty bushels to the tree, and are from two feet to two feet eight inches in circumference round the body, at two to three feet above ground; but few of the first peach-trees now standing. They are not long-lived here, but bear soon and abundantly for five to ten years, though some in this county are twenty-five years old; but the fruit is much better on young trees.

The Catawba Grape is much the best we have, and does finely, and will average (good and bad years) about two hundred and fifty to three hundred gallons of wine per acre. A few vineyards in this county have rotted (say one-half), but most of them are not as yet injured materially. I suppose twenty thousand gallons of wine will be made in this county this year (1857).

Strawberries also do well, yielding from fifty to one hundred bushels per acre. Hovey's are the principal crop.

All fruits do well here except the heart cherries and pears; they take the blight, and die in five or eight years, as a general thing. In my orchard of fruit-trees, I raise potatoes and low-growing vegetables for the first six or eight years; then sow down in red clover, and ploughing once in three or four years, so that the land is very nearly as productive as if no trees were on it.

Our crops of wheat, oats, and grass, in this State, were light; not half a crop. Corn (one of our great staples) will be abundant; hemp and tobacco, about half a crop.

Our railroads, or something else, have given a new impulse to business, and property is rapidly increasing in this State, though but little attention has as yet been paid to horticulture. I have tried to increase the circulation of your very valuable monthly in my vicinity; it will increase much in a few years, and I will continue my exertions in its behalf. We would be very much pleased to have you visit us this fall, during our Agricultural Fair. I think you would be pleased with the horticultural department.

## DESIGN FOR A COUNTRY HOUSE.

BY MYRON B. BENTON, LEEDSVILLE, DUTCHESS CO., NEW YORK.

THIS design is calculated to embrace convenient accommodations for a large family, combined with some elegance, without any great outlay for a high style of finish. The building is plain, with but few additions simply for ornament, and is allied to the Italian in style of architecture. The object is to give some beauty and elegance of appearance, from the general shape or form of the building, rather than by elaborate carvings, bead-work, and other "hard-finish," which are a constant expense by requiring frequent repairs, as well as the great cost incurred in their construction from the high price of labor.

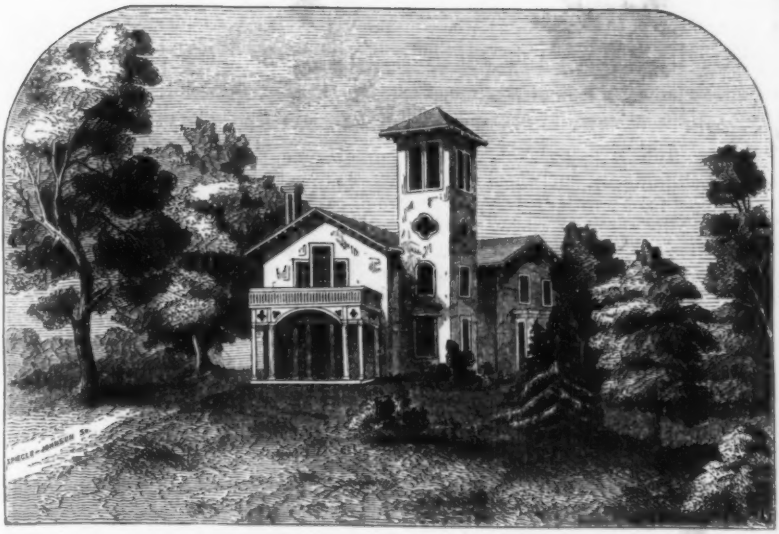
The approach is by the carriage way, which leads to the porch, from which opens the hall. The diagrams of the first and second floors will mostly explain the interior arrangement. Folding doors connect the parlors, which are octagonal rooms, each twenty feet from side to side. One of them contains a large bay-window, and from the other opens the veranda, by the triple window. The library occupies the lower part of the tower.

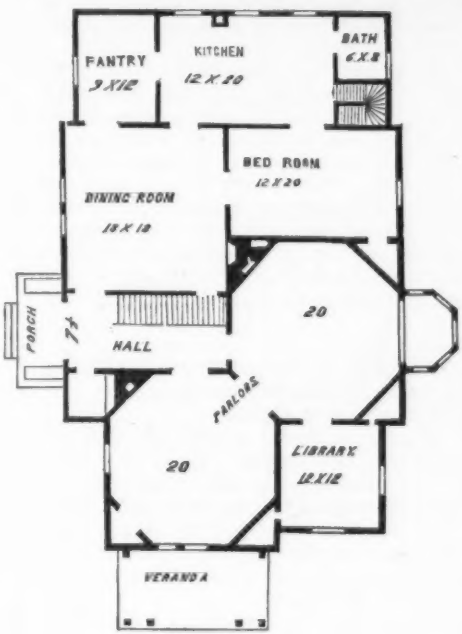
The chamber floor furnishes ten capacious apartments, with ample closet room. The stairway leading to the observatory opens from the passage. There would be another small room in the tower, immediately under the observatory, but above the second story.

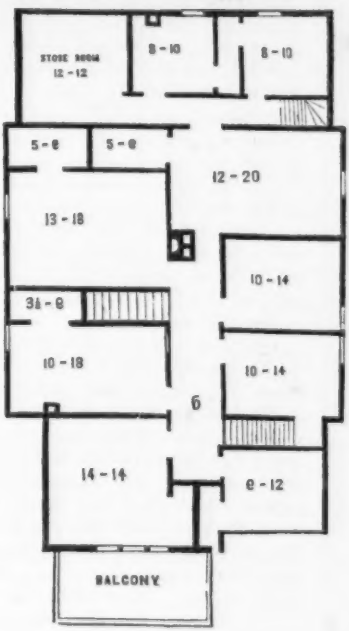
The entrance to the observatory is through a horizontal door in the floor, which being balanced with weights, is opened with perfect ease by a cord in the stairway. When closed it forms part of the floor, and thus leaves the room unincumbered with a stairway.

This design could be varied to suit the wants of a family who wished a smaller and less expensive house, by leaving off the back addition, and substituting the kitchen in place of the bedroom. The library, in that case, could be taken for a bedroom.

It is difficult to give an estimate of the cost of constructing a house, in different parts of the country, and on different sites. The cost of this would probably be from four to five thousand dollars, according to various circumstances.




PANTRY
9 X 12
KITCHEN
12 X 20
BATH
6 X 8
BED ROOM
12 X 20
DINING ROOM
18 X 18
PORCH
7½
HALL
20
PARLORS
20
LIBRARY
12 X 12
VERANDA


STORE ROOM
12 - 12
8 - 10
8 - 10
5 - 0
5 - 0
12 - 20
13 - 18
10 - 14
3½ - 0
10 - 18
10 - 14
6
14 - 14
9 - 12
BALCONY

# CALIFORNIA FRUIT-GROWERS' CONVENTION.

*Held at Stockton, Thursday Evening, October* 1.

FROM THE CALIFORNIA FARMER.

Not the least important part of the programme of proceedings for the State Agricultural Fair, lately held at Stockton, was the Convention of Fruit Growers, arranged for Thursday evening, "for free discussion and interchange of opinions."

Mr. Flint spoke of raising peaches on the Bay of San Francisco, on a soil of a sandy loam. At first his peaches had dropped off before maturing, and he was unable to raise a crop. As a remedy, in November he dug away the dirt from the trees, and applied ashes freely, and the next year the trees were loaded with an abundant crop of fine fruit. He recommended heading in, that the trees may be formed low, and the fruit should be shaded as much as possible. As our climate was different from the Atlantic States, where they have much wet weather throughout the year, our plans of operations were necessarily more or less different. He also recommended deep cultivation, and, as an example of its benefits, stated that by deep cultivation he had raised fruit successfully where previously grass would not grow.

Mr. Osborne, of Napa, agreed with the foregoing. At one time he lost a tree a week from some cause, and applied whitewash. For pears, he had applied salt with good effect. During the summer he would not plough too much among his fruit trees, but cultivate, without turning the surface under, and by this plan he killed out the weeds; if ploughed deep after dry weather came on, weeds would grow again, and the soil become very dry.

G. H. Beach, of Marysville, said he did not want to plough after the first of May, and was satisfied Mr. Osborne is right. The top soil should be kept loose. But deep ploughing, at the proper time, when preparing the ground, is the great desideratum; by using the subsoil plough, much less water is required for irrigation. He cannot get along without irrigation for fruit or vegetables. His soil is a sandy loam, and water twenty feet below the surface. If water is within five or six feet of the surface, no need of irrigation. His soil contains no alkali, consequently no bad effects resulted from irrigating; though too much water might tend to make the fruit insipid. In reply to a question from the Chair, as to what kinds of fruits succeeded with him, Mr. Beach said he had not had much success with apples; though he had found that mulching trees would prevent all sunblight, which at first affected his trees.

Question. Why not grow the trees low down?

Mr. Beach. Too much trouble, as it would be inconvenient to cultivate among them. In three or four years trees are past all danger from sunblight.

Chairman. What about Mr. Flint's suggestion of heading low?

Mr. Beach. There is a limit to it; if trees are formed too low, they are in the way; the limbs two feet from the ground would give room. His apple orchard is on too sandy soil to succeed well. The climate is the best in the world for grapes, which grow very sweet. Among the varieties he raised were Black Hamburg, Portugal, July and Catawba; the latter even sold well for a table grape. Of figs he had some dozen foreign varieties; the white will stand three degrees more of cold than the purple; the lower the land and plentier the water, the more liable to frost. He raised several varieties of white grapes.

Referring to figs, Mr. Osborne considered them the fruit of all fruits. Last year he obtained one White Ischia Fig, and now he had from it 300 trees growing

finely. Would not prune while sap is ascending. This fig was larger than any others. Those exhibited in the Hall were not genuine. The frosts of last year caused no injury. He has another fig which bears three crops a year. Those who thought the grapes of Los Angeles not so sweet as others, should try some when fresh, and not judge of them after they have been packed in redwood sawdust for several weeks. He loved the Isabella, as it reminded him of his old home and early associations. The frost last winter, though more severe than previously known, injured nothing but young orange-trees. Ice formed of the thickness of a sheet of paper, causing the Indians to exclaim, "*mucho frio!*" They had some 150,000 orange-trees, and 200 lemon. About 1000 acres of grape-vines are planted in a year, averaging 1000 vines the acre. In another year they would have in the county 3,750,000 vines. This is now their business; formerly it was cattle; but the "cattle on a thousand hills" have disappeared, and people have turned their attention to the vine. They make some raisins. Allowing one gallon of wine for each vine, at $1 a gallon, ten acres would produce $10,000, and, deducting $2000 for expenses, would leave a net profit of $8000. They had suitable land enough, if brought into cultivation, to produce yearly $60,000,000 in wine. Their best grapes are raised on high gravelly land, irrigated.

Mr. Beach said he imported the Catawba Grape for wine, but many preferred it for dessert.

Mr. Osborne, of Napa, said, last year his foreign grapes were killed by frost.

A. H. Myers, of Alameda, said he thought there was no danger of over-planting fruit, though many people feared there was. Trees are continually being lost from various causes; many are killed by drought, &c. He said the number now planted cannot supply the market. We can also grow a great many varieties; we can grow all our almonds and raisins. There are ten large orchards in the State, and tenfold more cannot supply the demand for fruit. A great business could be made in dried fruit; he had dried peaches in the open air in three days. Then we may expect large accessions to our population, and we must grow fruit for those to come, as well as for our present population. A person can eat more fruit here with impunity than elsewhere. We should endeavor to produce new varieties, which in a few years we could ship to the East, and undersell dealers there in their own markets. People should bear in mind that there can be no glut of fruit here.

Chairman. At the East, good fruit maintains a high price, though the production is great. Winter fruit, when imported here, becomes fall fruit. We can get varieties from the Southern States to keep up our supply.

Judge Daniels said we should endeavor to find out the best varieties of fruit for our climate. He had had ten years' experience in California; for the present should confine himself to the subject of managing trees. When trees are planted in the fall, he had found it best not to cut the top at the time of planting, but to cut in the spring. He would not cut or pinch in the summer, when the sap is in full flow—decidedly not. Those opposed to heading trees low, probably did not wish to prune or pick the fruit without climbing, or prevent weeds from growing, or protect the trees from sunblight. But different varieties may be treated differently. With apples the Jenneting and Alexander should be cut low, while the Bellflower and Esopus may grow more freely, as their limbs run horizontally. A low tree has a stiff stem, clean bark, and you can look over it better. The objection that you cannot plough under it has no weight, for there is no need to do so; it is not the place to plough, close to the tree, where the roots are near the surface; the fine fibres, which are the great supporters, are at a distance, and here trees should be irrigated, and not near the body of the tree.

Mr. Flint said that ashes applied to his trees saved them from the "curled leaf." The ashes were spaded in round the trees. As an example of the evil of training trees high, he mentioned the case of an extensive orchard of imported trees, planted five years ago. The trees were trimmed high, and had as yet produced no fruit of consequence, the dry rot being one evil. This result is equivalent to an immense loss, for if the trees had been properly managed they should have borne fruit enough this year to realize $30,000.

Mr. Osborne, of Napa, had tried ashes, but could not perceive that they had any effect.

Mr. Beach, as an experiment, applied a barrel of leached ashes to a single tree, and it grew a third larger than others in consequence.

The Chairman said there was much complaint in regard to peach-trees being affected with the "curled leaf." He believed it was caused by cold winds.

Mr. Flint. It extends all over the Atlantic States and Europe, and the cause was generally considered to be unknown.

Mr. Beach had this season visited Gen. Sutter's place, and also been on Bear River. He had found that where an orchard was so situated that it did not receive the southeast winds, the trees were blighted. But there was nothing in these occurrences that need alarm any orchardist. We must expect some little drawbacks among our many advantages. On the 20th of January last the weather became quite warm; peach-trees started, and blossomed two weeks earlier than usual; this was followed by cold winds, and he had no doubt was the cause of the blight or "curled leaf."

Capt. Aram, of San José, said he had seen no blight on imported trees till this year, while California fruit had been affected every year. The varieties affected vary according to the seasons and locality. The Heath Cling failed in one locality and not in another. He agrees with other gentlemen as to the cause.

Mr. Yount, though an old resident, had not seen it till within a few years.

Judge Daniels said that Southern peaches start too early in the season, or before the atmosphere is prepared for them, when, becoming chilled by the cold winds, the sap bursts out, parasites gather, and the fruit all falls off. In May the tree will come out fresh again. We must get trees that are accustomed to shorter seasons, which do not start so soon, and will do much better. He had seen the "curl" in this State for ten years; when he first came into Santa Clara Valley from Sutter's Fort, he saw it.

The Chairman explained that when he spoke of obtaining varieties from the Southern States, he referred to apples.

Judge Daniels (in reply to the statement that winter apples became fall apples here, and would not keep) said the Chairman was probably not aware that they had a two-year-old Horticultural Society in Santa Clara County, and at the monthly exhibitions had exhibited fruit every month in the year. They had the Pearmain in winter, and the Bellflower in winter. Fruit would keep as well here as elsewhere, if properly put into barrels and taken care of. Mr. Osborne, of Napa, said some trees he imported from Boston had blighted, and he believed the cause to be frost after warm weather.

Chairman. How about alkaline soil?

Mr. Flint. Alkali is necessary.

Judge Daniels. Although alkali is an important element, you can have "too much of a good thing." A child would not live on beefsteak. We must plough deep; we should not put peaches on such soil. There is much yet to learn. He had observed that the peach does not curl, if sheltered by the oak.

Mr. Osborne, of Los Angeles, stated, in regard to alkali, that two years ago he

purchased a small farm, being unacquainted with the nature of the soil. Not thinking of alkali, he put in a lot of fruit trees and roses; after which he learned that it was a strong alkali soil, and that his trees were probably lost. As a remedy he planted tobacco among the trees, which grew well, and he only lost about one-third of his cherry-trees, no pear, apple, or quince, and the roses run riot. He had not been troubled with the curled leaf, and observed that imported varieties had no curl. His locality had a southern exposure and gentle winds, being protected at the north and west. The curl seemed to be hereditary in California trees. He uses plenty of water.

Mr. Beach said two of his trees by the side of a water ditch were not affected by blight.

[If we are not mistaken, the above facts and other remarks were regarded by those present as showing pretty conclusively that water was a preventive of blight or curled leaf, and consequently trees irrigated freely would not be affected.]

A. P. Smith, of Sacramento, was decidedly in favor of deep ploughing. In cultivating during the summer he was opposed to ploughing, as he was satisfied from experience, that only the top soil should be stirred; it was an injury to stir soil deep during dry weather. In regard to irrigation, he was satisfied of its utility, and that it was of great advantage in fruit growing, though of course fruit *could* be grown without it. But much care was requisite in regard to applying water at proper times, and there were many things to learn. When the peach has attained a small size, it remains comparatively stationary for a time, while the stone is forming, and the tree is apparently dormant. If water is applied at this time, it starts a growth of wood, and the peaches all drop off. But after the formation of the stone, when the peaches again commence to grow, the trees may be irrigated with advantage.

A design is on foot to start a monthly publication, devoted to horticulture, mechanics, &c., and if thirty men would advance $100 each for advertising, a fund would be raised sufficient to establish it on a permanent basis.

Several gentlemen signified their willingness to subscribe, but some objected to do so unless the publication was in their own locality, and considerable discussion was had on the subject, a strictly horticultural production being mostly favored.

Mr. Osborne, of Los Angeles, said he had not seen anything published in relation to their great staple. There were many points on which they desired information. If one man could raise grapes earlier than his neighbors, they wished to know the plan; also why one man could produce more wine than another. In regard to the importance of the vine product, he said they had a richer placer than the mines, though the land was only assessed at 12½ cents the acre; but when properly brought into cultivation it would yield $60,000,000 annually.

Mr. Osborne was in favor of a Committee. The many cases he had seen of the same variety of fruit under different names proved the need of such a committee. In the Exhibition he found his old acquaintance, the Roxbury Russet, called by several names, and Duchesse d'Angouleme was called Dutch Pear.

Judge Daniels thought the number of the Committee should be one in every county, when a suitable person was found. A few of the Committee might be appointed now, and the balance at a subsequent time.

A motion to appoint a Committee on Nomenclature was then adopted, and the following gentlemen appointed on the Committee:—

Judge Daniels, of San José, *Chairman;* A. P. Smith, of Sacramento; Geo. H. Beach, of Marysville; Wm. H. Osborne, of Los Angeles.

The meeting then adjourned.

## LOCOMOTION OF THE HORSE.

EDITOR HORTICULTURIST: The young people of our neighborhood have interested their elders in the subject of the manner in which a horse moves his legs and feet, which, it seems, we have disagreed on. Will you please to settle it?

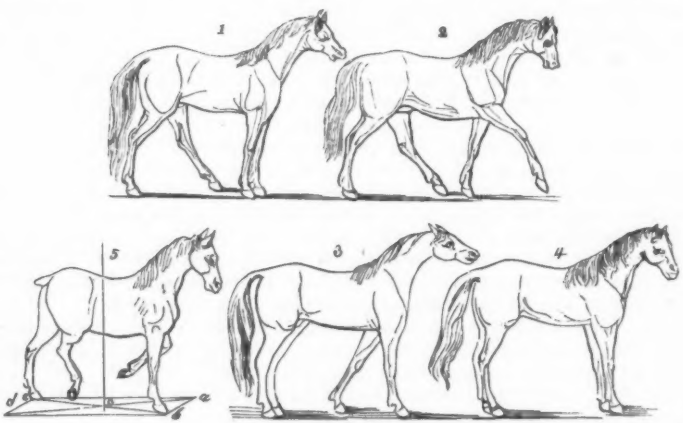
EQUUS.

Distinguished anatomists and philosophers, no less than the unlearned, have fallen into gross mistakes upon this subject, in consequence of trusting to theoretical opinion rather than to the evidence of observed facts. There is more than one statue in the world mounted upon horses with their legs in positions that would never keep them up.

A late *English Cyclopædia* places this subject in its true light; as it possesses interest to all our readers, with the aid of four or five woodcuts we proceed to make it intelligible.

Quadrupeds move their four legs either singly or successively, or in various orders, which correspond with the different velocities of the animal. These different kinds of movement of the legs are known under the terms walking, trotting, galloping, and leaping. The horse illustrates the manner in which the locomotion of quadrupeds in general is effected. Though the subject possesses more or less interest to most persons, yet of the millions of people who are in the daily habit of seeing the horse in motion, how very few consider the means by which the movements of that valuable animal are performed, and are, consequently, in the condition of our inquiring correspondent.

Let us suppose the horse to be standing on its four legs (as in Fig. 4), and that it commences the walking step by moving its left hind leg (as in Fig. 1); this having been advanced, and placed on the ground, the right fore leg is next




Locomotion of Horses.

raised and advanced (as in Fig. 2), and having been placed on the ground, the right hind leg performs a similar movement, and the legs of the animal are in the

position Fig. 3. Lastly, the left fore leg is advanced, and placed in the position of Fig. 4. These four movements complete the step, and during the series, the centre of gravity of the animal passes over a corresponding space. This is the order in which nearly all quadrupeds move their legs in slow walking; but some authors do not coincide in this statement, amongst whom is Borelli, who has figured the horse as moving both the legs on the same side at once in walking, as some horses are taught to do in the amble, and as the giraffe is known to do naturally.

A little consideration will clear up the error into which Borelli and others have fallen, respecting the horse. It will be observed, from the foregoing statement, that the left hind leg moves first, the right fore leg second, the right hind leg third, and the left fore leg fourth. Now, if we do not analyze this order of motion from its commencement, we may be easily deceived; for, in walking by a horse, the two legs appear indeed to move together on the same side; but this arises from the continuity of the series of movements, which we find begins with the left hind leg, and terminates with the left fore leg, the movement of the right fore leg being in like manner followed by that of the right hind leg, which continuity of movement, if not carefully discriminated, gives an impression that the animal moves both legs on the same side simultaneously.

*The Trot.*—In trotting, the horse moves its legs in pairs, diagonally. Thus, if the legs *a d* (Fig. 5) be raised, and advanced first, the legs *b e* will be raised the instant those designated by *a d* reach the ground. On the other hand, when the legs *b e* are raised before the legs *a d* reach the ground, there is a minute interval, during which all the legs are raised above the ground at the same time. In trotting, each leg moves rather more frequently, in the same period of time, than in walking, or nearly as 6 to 5; but the velocity acquired by moving the legs in pairs instead of consecutively, depends on the circumstance that, in trotting, each leg rests on the ground a short time, and swings during a long one. In walking, the trunk oscillates laterally, whereas, in trotting, it oscillates vertically; but in each of these kinds of movement there appears to be a slight motion of the trunk of the animal both laterally and vertically.

It may be observed that the vertical line traversing the base of support, passes through the horse in such a manner as to leave by far the greater part of the weight of the body to be supported by the two fore legs.

*The Gallop.*—In galloping, the horse adopts three different methods of using its organs of locomotion, which are distinguished by the number and the order in which the feet reach the ground.

*First Order of Motion.*—If the four legs reach the ground in succession, the left hind foot reaches the ground first, the right hind foot second, the left fore foot third, the right fore foot fourth. This is the gallop of four beats, sometimes denominated the canter. This order of movement is not adapted for great speed, but is an agreeable motion in riding on horseback for ladies, or for gentlemen who ride lazily or badly.

*Third Order of Motion.*—In this kind of action, the horse moves the legs in the same order as in trotting; that is, the left hind and right fore feet reach the ground simultaneously, then the right hind and left fore feet. This is the order in which the feet move in racing, and whenever the greatest speed is required. It is called the gallop of two beats.

*Leaping.*—In leaping, the horse raises the fore legs from the ground, and projects the body upwards and forwards by the hind legs alone. It is well known that they leap rivulets, hedges, and ditches, with great ease, even under the burden of heavy riders; but, to accomplish this, an enormous expenditure of muscular

action must be required, since the muscles which produce the effect act at a great mechanical disadvantage.

Horses which are constituted for great speed, have the shoulder-joints directed at a considerable angle with the arm. Saintbell has given the relative proportions of the several parts of the skeleton of the celebrated race-horse, "Eclipse," together with the angles of inclination and range of motion belonging to the joints and legs. According to his account, that horse, when galloping at liberty, and at its greatest speed, passed over twenty-five feet at each step; these strides were taken two and a half times in a second, being at the rate of about four miles in six minutes and two seconds, or forty miles in an hour and twenty seconds.

The subject has puzzled very wise heads, and will interest all those who love a fine horse.

## WINTER MANAGEMENT OF VIOLETS AND LILY OF THE VALLEY.

THE first thing to be secured is an immunity from frosts. It does not signify their being subjected to a low temperature at night—such is, indeed, desirable—but they will not endure frost as to the blossoming principle. I am here speaking of the Neapolitan Violet, for no other will force so successfully, as far as I am aware, in frames or pits. Let me then suggest a standard of temperature; I will merely point to that proper to obtain if possible. From the early part of November to the end of February, I should desire from 40° to 55° by day, and 34° to 40° by night. But we all know that such precise conditions are not easily attainable; all I can say, then, is, approach this standard as nearly as possible, only do not let them freeze. But there is another feature attending the culture of winter violets which is of equal importance to any other condition; it is this—the avoidance of damp. To this they are very liable, especially after being shut up for days, as in the case of snowy periods and those of intense frost. And I may here remark, that the more gross the plants are, the more liable are they to a kind of putrefaction in the foliage. This is to be particularly guarded against, for it spreads like wildfire, and, if not checked, will speedily undermine the utility of the plants. Dryness of the internal air of the frame or pit is, therefore, one of the leading features in violet culture, and must be promoted by all means in our power. This caution at once points to the reason why but one watering had been given the pit. Therefore, to plant them in a tolerably dry or mellow medium, and to sustain them afterwards with as moderate an amount of water, is one of the grand points to aim at. And let no man be alarmed at their looking dry or husky on the surface; this is just as it should be, for the violets are not merely blossoming through the soil they are in, but through a disposition which has been engendered in them during the out-door summer culture.

Let me direct attention to their ventilation; nothing requires more of this than the violet. On all occasions, let even the very lights or sashes be pulled off in the daytime, provided they neither freeze nor receive any rain, or otherwise that there be no cutting winds.

LILY OF THE VALLEY.—This, although a common border plant, is a great favorite with the ladies in early spring, but it is by no means an easy affair to force it early. Strong crowns are indispensable, and these must be sought for by high culture during two seasons previous to the forcing period. The roots may be taken up in the end of October and sorted, selecting the thick buds with their roots as entire as possible, and reserving the smaller for succession buds if neces-

sary. The strong roots may then be placed in pots as thickly as possible, and afterwards plunged overhead in cinder ashes, and removed to heat as requisite. A moderate heat suffices for them; from 60° to 70° maximum of bottom warmth, and an air heat of 50° to 55° will be better than more, as they are apt to draw or grow up weakly. They should be plunged overhead in old tan, or any other light material, until the stems are fairly through the soil, and then the surface covering removed in order to stiffen the shoots. One caution here is necessary—they must not be exposed to light suddenly. When first removed from the covering their stems will be whitish, and it requires a week to inure them to the light, and this must be done gradually, or the shoots will suffer. Afterwards they may be placed in any situation indoors, even under the greenhouse stage. By these remarks, it will be seen that a bottom heat is essential, and that beyond that they demand little, except an immunity from the frost. The soil at all times must be kept moist; they abhor drought.—IOTA.

## TRANSPLANTING WILD EVERGREENS.

BY W. B. LIPSEY, CARDINGTON, OHIO.

THINKING that a few remarks might be acceptable to some readers, on planting evergreen trees obtained from the forest, I venture to give some of my experience. During the last few years I have devoted much time to the subject; have collected hundreds of thousands, and transplanted a considerable portion of them. I find that, to be successful, the plants should be procured in soil where they can be taken up without loss of roots, and from open grounds, or where the large forest trees do not shade them much; and, above all, never allow the roots to be exposed to the sun or drying wind. Plant carefully in good, well-prepared soil; a partial shade is very beneficial, and for a quantity of small plants the shading process is simple. Plant thickly in beds running east and west, some four or five feet wide; edge up broad boards on the south side of the bed, and forks on the north, with pales reaching from one fork to another; cut green brush from forest trees, which will be nearly or quite in full leaf, lay it across from the boards to the pales pretty thick, just above the tops of the plants. No further care is necessary that summer, except to pull out what few weeds may make their appearance. Shading pays well in saving plants; for example: last spring I put out in one bed, some eight rods long and five feet wide, about 40,000 plants, principally American Arbor Vitæ, and shaded as above, and I can safely say there was not to exceed 200 dead plants in the bed.

Some kinds of large trees may be moved successfully, as the Firs, Arbor Vitæ, Larch, &c., by retaining a portion of earth with the roots, and careful management; otherwise it is useless to spend time and expense with them. There is much imposition practised in some sections by *tree peddlers*, who collect wild pines and other trees from the rocky hills or sand deposits, consequently without rootlets, expose them to sun and wind, sell to persons who do not understand the habits of them, and, of course, nearly all die.

The White Pine is by some considered very difficult to make grow; my experience is, that when carefully and well managed, it is pretty sure to succeed, although not so well as the Arbor Vitæ, which is the most sure of all evergreens.

The Balsam and Spruce will not bear much exposure, although, when properly cared for, will generally do well; they should be the first planted, when a quantity is received. The proper time for planting evergreen trees is just as they commence to grow.

## A TRIP TO CUBA AND THE SOUTHERN STATES.
### NO. 9.

Mr. Henry Lawrance, a cotton merchant, is the horticulturist of New Orleans. Mr. L. originated the Crescent Seedling Strawberry, which has not succeeded at the North, but, he assures us, retains all the characteristics claimed for it in this climate. The fruit was just coming to maturity, and was bringing monstrous prices in the stores on Canal Street. Mr. L. kindly drove us to his fine garden residence, now almost, if not quite, within the built part of the city. The Crescent Seedling bush is apparently a smallish one, with only a few leaves above ground; yet the berries were very numerous and showy, but not, to a Northern eye, very large.

At Mr. Lawrance's we again felt for Northern cultivators who were now (March 31) employed in shovelling snow, while Mr. L.'s garden was most superbly ornamented with orange, lemon, and lime-trees, in full bearing. His foreign grapes (in the open air) are moderately successful, though, we presume, the atmosphere is too damp, as a general thing. He has success with the banana when planted on the southern side of a house. His bees and poultry are remarkably fine, and we could not but envy some of his successes.

As a general thing, gardening about New Orleans is not much studied. Efforts are being made to get up a horticultural society, and Mr. Lawrance has moved in the matter, and interested some of the influential and wealthy citizens; but the town is so much occupied, in winter, by transient residents seeking a fortune, and, when that is acquired, leaving for their native places, that it requires great exertion to do a good thing for general benefit. The place, too, is so constantly and easily supplied from two regions by steam—the tropics and the cereal or apple country above—that there seems less inducement to cultivate on the spot what nature appears to have designed to bring to their doors at so little cost. Nevertheless, a society will be very useful, and we were very glad to hear Dr. Mercer (the Girard of New Orleans) express his willingness to assist, and his interest in the matter. Mr. Lawrance, we were glad to see, had supplied Dr. M.'s table with an early basket of Crescent Seedlings.

We could hear of but few good public gardens, and after a saunter among the beauties of the suburban villas of Lafayette, where more variety of planting might be studied with advantage, we finished our view of New Orleans by a visit to its cemeteries. They present the novelty to Americans of entering in tombs and ovens above ground; but, altogether, there was more neatness, and less to object to, than we had been led to expect. Expensive monuments are general in the best grounds; we could but copy from one the following most touching inscription:—

"There is not an hour
Of day, or dreaming night, but I am with thee;
There's not a breeze but whispers of thy name,
And not a flower that sleeps beneath the moon
But in its hues and fragrance tells a tale of thee,
Poor Caroline!
Only 23.
Dearly loved, and deeply mourned, by one faithful heart."

There is but one inscription, which we now call to mind, that has impressed us so forcibly in reading on the spot; it is that of Gray, the poet, to his parent, in the churchyard of his own elegy, at Stoke Park, the residence of the Penn family:—

"The mother of many children,
One only of whom had the misfortune to survive her."

Not meeting the friend to whom our visit was principally intended, we left the elegant hospitality of New Orleans, and joined him, by telegraphic invitation, at Natchez (Mississippi), ascending the river in the fine steamer Princess, built to accommodate the better class of passengers from Memphis and Natchez. Every comfort that seems practicable, is combined in this boat; the sleeping arrangements are eminently comfortable; the table all that could be desired, each day furnishing the luxuries which we had brought in the Empire City from Havana, of bananas, oranges, and even pine-apples. So far has the luxury of these river boats been carried, that a St. Louis packet, the New World, now sails equipped with the force and material of a *daily paper on board*, and with a job office attached for printing the bills of fare, and other work. This was to be one of the novelties of the Leviathan, but Brother Jonathan is in advance of the English in these matters.

The upper deck cabin of the Princess is two hundred and eighty feet long; when well lighted up with Cornelius' Philadelphia lamps, it is one of the most striking scenes imaginable. We ascended rapidly *through* the sugar region, and entered upon that of cotton before reaching Natchez. This sugar country presents many attractions; more cultivation and thicker settlements than we anticipated. We could distinguish as a frequent tree, the Pecan, which is somewhat like a hickory, and produces most abundantly; the inhabitants here away, however, pay little attention to supplying anything but sugar. The best pecans come now from Texas.

The progress of the boat was stopped occasionally, to run its bow into a bank, and land a few passengers or cotton baling; the cotton, and the food for the negroes, is a descending cargo on this river. Occasionally, very large and showy houses and out-buildings came into view in this level country, marking the residences of successful sugar growers, and sometimes a good, shady garden, with its golden orange-trees, marked the scene. On the spots most adapted to sugar, there appeared to be an amount of very comfortable housekeeping, but we never *shall* get accustomed to a river that is always pouring itself out, and *running one way!* This is, no doubt, *prejudice*.

The great rivers emptying into the Mississippi, it might be naturally expected, would present some kind of improvement at the junctions; but rarely do we find this to be the case. At Red River, we stopped to dismiss two passengers, and moored alongside a "shore boat," the only habitation visible. These boats are mere waiting places, and are about as comfortless as possible.

Natchez reached, our first visit was paid to the great plantation of Dr. Mercer, Laurel Hill. The road, of some ten miles, passes many fine plantations and excellent houses; among others, that of Mr. Sargent, one of the Boston family of that name, who was Commissioner to receive Louisiana into the Union on its purchase. Here began to be visible the miles upon miles of hedges of the Cherokee Rose, which, we must say, is one of the most beautiful objects of the kind ever presented to the eye. It was in full bloom—the leaves of dazzling brilliancy, and the coming buds most vigorous and graceful. These hedges occupy the great breadth of ten feet, and fall about in regular festoons of exquisite beauty, which no description can bring vividly to the reader. What a pity this rose is not hardy north of the Carolinas!

But if the hedges were so magnificent, what was the Northern lover of trees to say to the evergreen magnolias, *M. grandiflora*, which soon became as common as our oaks in the forests? *Thousands* lined the road in every coppice with their

glorious dark foliage, and of dimensions like our tulip-trees. This experience of hedges and magnolias alone compensated for all our fatigues. Sometimes the Cherokee Rose festooned the magnolia, a sight we hope never to forget. On entering Dr. Mercer's park and woods of four thousand five hundred acres, these trees became giants; intermixed with oaks, the contrast was lovely beyond our powers of description. Dr. M.'s house is occupied by an adopted son, Mr. Shields, whose hospitality deserves more than a note; it is built to suit a Southern climate, and might be likened somewhat to a first class East India bungalow, enriched with every elegance. Built round a hollow square, and of one story, it presents an appearance of comfort such as one would select to repose in for a few centuries, if the lease of life were to be so extended. Its verandas and projecting shades exhibit on every side the finest old trees of evergreen magnolias, casting their dark green shadows on the lawns; these, and the fine oaks, record their planting by nature's hand long anterior to the occupation of the white man; they would be the pride of the oldest family in Christendom. Their enormous stems were covered with running vines, while the limbs of one magnolia we paced, extended in a circle of three hundred feet! As we drove through the park, an occasional *whirr* marked the rising of a wild turkey; so completely is the scene one of nature's own glorious formation, that we wished *all* our readers could enjoy it with us. The Bignonia capriolata here grows wild, and festoons itself from the highest limbs.

In the garden (ably controlled by the ladies of the mansion), the Camellia lives in the open air, and attains a height of fifteen feet. Pomegranites require no housing, but issue a succession of scarlet flowers and excellent fruit. But what shall we say of the roses? A white Lady Banks Rose we took the pains to measure; the stem, at three inches from the ground, is twenty-one inches in circumference, and it covers a circuit of ninety feet, running, and hanging *full* of bloom from every tree within its reach, to the height of thirty or more feet! Hedges of Pyrus japonica, Magnolia purpurea (eighteen feet high), Wax-trees (*Ligustrum lucidum*), Crape Myrtles (*Lagerstræmia*), twenty-five feet in height, Coral plants, Pittisporums, and similar greenhouse pets with us, run riot in this delicious climate. The finest red roses mounted the pine-trees to the upper branches, forty feet from the ground. Moss roses, the Olea fragrans, white Tea roses (whose bloom measured eleven inches in circumference), peaches, pears, and so forth, were as numerous and superb as heart could wish. Grapes do not succeed very well.

Dr. Mercer possesses eight thousand acres here, less than one-half being a cotton plantation, occupying four hundred and seventy hands. When we say that we dined on asparagus and strawberries at this early date (April 3), we must leave the reader to imagine the rest.

## NOTES UPON THE FRUITS OF 1857.

BY W. C. STRONG, BRIGHTON, MASS.

Mr. Editor: It may be interesting to fruit growers, in other States, to learn our experience in Massachusetts during the past season. I send a few notes, and will commence with the early small fruits. An unusually fine display of new English varieties of strawberries during 1856, led us to hope for the same result this year; but the severe cold of the past winter disappointed us. Few varieties were on exhibition, and these not to be compared with the previous season. That any English variety is desirable for our climate, is a question yet to be proved. I think it is conceded that the Jenny Lind is a decided acquisition, and entirely

supersedes the Early Virginia as a hybridizer with Hovey's Seedling. The currant is deserving of more attention than has been hitherto paid to it. Several new varieties have made their appearance, but have not been sufficiently tested to be spoken of with confidence. We regard the cherry currant as too acid for any purpose [perhaps it might supersede cranberries, or be useful for preserves—ED.], and of no value for wine. The wine of the White Dutch had a decided preference over the Red, among the Fruit Committee of the Massachusetts Society.

A full opportunity has now been given to test the Lawton Blackberry with our own Dorchester, and we give unusual honor to home productions. The Dorchester is regarded entirely superior in quality, and as a show and market fruit. It was on exhibition from August 8 to September 21, and has taken all the premiums.

Among raspberries, Fastolf has taken the first premium. Brincklé's Orange is not yet fully cultivated for competition, but it is considered a great favorite. The Catawissa has indicated remarkable productiveness, this fall, and its fruit seems to be of good quality. We hope the second year's trial will give us larger fruit.

Of gooseberries we make but little account, with the exception of Houghton's, as a market fruit. The Mountain Seedling has been exhibited for the two past seasons, and seems to be very productive, and free from mildew. It is of medium size, with thick skin, but of fair quality.

Stanwick Nectarines were again tested, and pronounced far before any other variety, in point of flavor.

Many varieties of hardy grapes have been exhibited, some of which were of marked excellence. The Diana has for years been a favorite as a table grape; but it is remarkable, that the quantity exhibited has always been limited, and, in general, not well grown. This variety undoubtedly requires high culture, and great care in guarding against mildew. It will probably never become a popular or market fruit. A bunch of Union Village was exhibited October 17, which was of great size and beauty, but was not tested. The Carter Grape, which is undoubtedly a seedling from the Isabella, and is probably ten days earlier, was judged decidedly more sweet, sprightly, and agreeable, than its parent. Concords, under the culture of Mr. Bull, have preserved their usual fine appearance; but, with respect to quality, the Rebecca and Delaware stand, thus far, unapproachably at the head of the list. They were tested by the side of Sweet Waters, Black Hamburghs, and even the White Frontignans, grown upon the walls in Boston, and were admitted to take rank with them. The Delaware was deliciously melting, and reminds us of the flavor of Macready's Early White. Rebecca is larger, and with a fine, vinous aroma, for which I should give it the preference. Both withstood the severe cold of our past winter. Some inquiry having been made respecting the "Massachusetts White," I will say that it has not been exhibited among us, and we are totally ignorant of its merits.

In regard to pears, mention should be made of Mr. Dana's seedlings. No. 16, a small but delicious variety, ripening a little after the Seckel; and also of No. 19, which is probably a seedling from Beurré Diel, and is of good quality, though rather coarse. But in this field of pears, I will not grow prolix over the thousand and one varieties which afflict the ears, purses, and, shall I say, mouths of the community. With the present extended list, to discard and also to adapt varieties to varying soils, is performing quite as important a task as that of hybridizing and introducing new sorts. The man who, out of a thousand seedlings, shall bring forth one which may be marked "superior," is entitled to everlasting gratitude, only on condition that he commit to the flames the worthless nine hundred and ninety-nine.

## THE ESPERIONE GRAPE.

Mr. Aiton, writing in the Horticultural Society's *Transactions*, iii. 93, where a colored drawing is given of this grape, says: "I first noticed the *Esperione* Grape about the year 1804, in the catalogue of Mr. R. Williams, the respected nurseryman at Turnham Green. Struck with the novelty of the name, I procured from him three healthy vines, which were planted the same year in His Majesty's gardens at Windsor in a south aspect, and 800 square feet of wall were allowed for their culture. This space was completely covered in the fourth year, and since that time the plants have always produced and matured large crops of fruit. Unfavorable as was the last season, they ripened about 1200 bunches of well-colored grapes. The *Esperione* is prolific to an extraordinary degree, very hardy, and of most luxuriant growth, perfecting its fruit equally well and early with the *Sweetwater* and *Muscadine*, and in unfavorable seasons has a decided advantage over these varieties, and, indeed, over any other hardy grape that I am acquainted with. The wood of this vine is strong and high-colored; the buds are large, round, and woolly. The fruit is produced on large bunches, handsomely shouldered, differing little in size from the *Hamburgh*. The berries vary much in size, being sometimes round, frequently flat-rotund, and indented on the head with the remains of the style. A groove or channel is often observed on one or both sides, decreasing from the head downwards. The skin, which is covered with a thick blue farina, is of a deep purple color, inclining to black. The flesh adheres to the skin, and though neither high-flavored nor melting, is pleasant. The leaves are variously cut, and die upon the tree of an orange hue."

Lindley, in his *Guide to the Orchard*, copies the above, but gives no additional information. In the *Catalogue of the Horticultural Society* it has the synonymes "Hardy Blue Windsor, Turner's Black, Cumberland Lodge, and Red Port (of some)." With regard to the name, we believe it to have reference to its being raised from seed in the west, *esperios*, in Greek, being *westerly*.

## NEW PEARS.

BY L. B., NEW JERSEY.

I send you the outlines of some fine fruit forwarded to me by Hon. J. S. Cabot, of Salem, Mass. Owing to European uncertain seasons, a great many fine varieties, once or twice tested (years ago), have since failed to produce fruit. In this climate, however, we are more fortunate, and as soon as the tree is disposed to bear, we may expect some fine fruit, if that fruit be suited to this climate.

Mr. Cabot fruited not only some very little known European pears, but, also, he was fortunate enough to get from his numerous and fine seedlings four different pears, all of the *best* quality. These are not very large, two being of middle size, the other two below medium, and that is the only objection, in my opinion, to the admission of such fine fruit in our catalogues. *Apropos* of that, permit me to remark, Mr. Editor, that it is more than time that something be done towards the sifting of all these names and synonymes. It is nearly impossible for the most extensive nursery to cultivate even a small proportion of all the varieties contained in the catalogues, and they are only one-half of all the known varieties. Still, amateurs will stick to some fruits with peculiar flavors, or for some other reasons; and nurserymen must cultivate them often without any possible profit. Every-

body, of course, is at liberty to show his preferences in the choice of fruit-trees; but I believe, after a few years more of experience, amateurs will have to be satisfied by purchasing *such* varieties from the nurseries *specimen-trees*—that is, purchasing the scions for grafting, no trees of the sort being cultivated for sale. We have over a score of the finest and largest pears, extending almost over all seasons. Those should be selected for general cultivation, and the smaller or less productive varieties left for the amateurs and such as have room and time to spare.

To return to Mr. Cabot's pears, I will only state that his seedlings proved uncommonly fine, some possessing a peculiar spicy taste, with abundance of juice and sugar. As many of them are not named, and perhaps will never be, I will only mention the two large pears which were sent to me.

The one is *Auguste de Maraise*—a large, fine, pyriform fruit, with a rather rough-looking skin, dotted and patched with deep brown. Stem, rather short, or medium. Calyx, close, sunk in a shallow basin. Flesh, buttery, flavored, juicy, sweet, *delicious*, partaking a little of the Duchesse, but more delicate, and of a different flavor. Ripened October 20.

The other is the Beurré de Konink. Both are seedlings of Van Mons, but little known in Belgium. This fruit is rather larger or more full than the preceding one. It has the same appearance, as far as the color and the patches of the skin are concerned, as the Auguste de Maraise, but its stem is rather longer, more slender, and surrounded at the cavity with fleshy protuberances. Flesh, rather coarse, but juicy, highly flavored, and *truly delicious*. Both these varieties are among the best I have tasted this

Fig. 1.

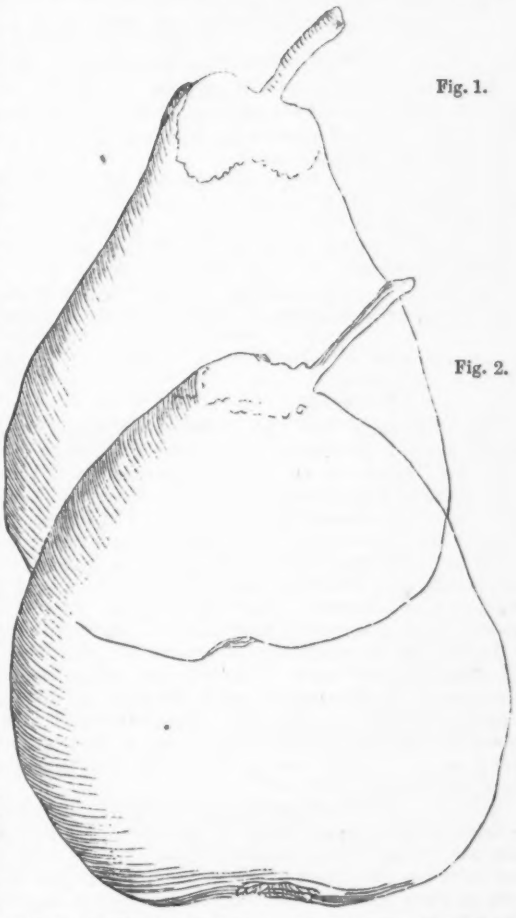


Fig. 2.

Fig. 1. Auguste de Maraise. Fig. 2. Beurré de Konink.

season, and they seem to be of such a texture as not to be subject to *sporting* or changing their quality in ordinary seasons.

I believe these sorts so long overlooked in their native country, where perhaps few specimens ripened in proper condition for a number of years, are well worth a trial. If their bearing qualities come up to those of the Duchess and the Louise Bonne, they may certainly be considered as acquisitions, being at least equal, if not superior, to some of our large standard varieties.

## ON THE NORTHERN LIMITS OF VINE CULTIVATION.

(TRANSLATED FROM A. DE CANDOLLE'S GEOGRAPHIE BOTANIQUE.)

*With Remarks by R. Buchanan, Cincinnati, Ohio.*

In Europe the limits of vine cultivation on an extensive scale, and for the purpose of wine-making, have retrograded from the northwest towards the southeast during the last few centuries; but before dwelling upon the abandoned limits, we shall trace the existing ones.

Portugal is famous for its vines; but in Spain their cultivation is not universal, being wanting, wholly or in part, in the moist northwestern provinces of Galicia and the Asturias; they are not even habitually cultivated in the comparatively drier mountains of the Asturias, though some intelligent agriculturists have a few acres of vineyards. In the southwest of France, the vineyards are beautiful.

According to the government statistical tables of France, published in 1837, the extent of the vineyards, in 1834, was in the departments—

| | Acres. |
|---|---|
| Loire Inférieure . . . . . | 8120 |
| Morbihan . . . . . | 217 |
| Ille-et-Vilaine . . . . . | 56 |

The more exact limits are—Southern Brittany, lat. 47° 30′, from whence the line is directed eastward to the department of Mayenne, where in 1834 only 304 acres were under vineyards; to the department of L'Eure, 412 acres; of Oise, 834 acres; and of La Somme, 5½ acres. A little wine has been made to the west of this line, as at Caen, Calvados, and even in Jersey, but these are exceptional cases, which do not affect the general accuracy of the result above given. Those departments of France which did not return above 2½ acres of vineyards in 1834 are, in the west, Finisterre, Côtes du Nord, Manche, Orne, Calvados, Seine Inférieure, Pas de Calais et Nord; in the centre, those of La Creuse and of Cantal, where the elevation of the land makes the climate too rigorous.

In Belgium, the cultivation of the vine on a grand scale ceases at Argenteau on the Meuse (lat. 50° 45′). Descending the Rhine, beautiful vineyards advance as far down as the hills extend, and below Bonn, as these conditions disappear, the vine becomes rare, stopping altogether at Dusseldorf. In Northwestern Germany, Potsdam and Berlin are the extreme limits. In Saxony, vineyards are more frequent up to lat. 51¼°—as at Weissenfeld, in Prussian Saxony, and at Meissen, north of Dresden.

This line, extending from the mouths of the Loire to Potsdam (lat. 49¼° to 52⅓°), is throughout its whole extent to the south of that to which the vineyards once attained. Not only are vines now grown here and there to the northward of it, but there are proofs that formerly, towards the close of the middle ages, and for two or three previous centuries, vineyards were numerous to the northwest of these limits.

In Normandy, it is matter of tradition that numerous vines were destroyed in the 14th century by the English, who, from holding Guienne, were anxious to favor the vine growth of that country. From the 12th to the 13th centuries, a number of maps allude to the vines of Normandy, Brittany, and Picardy.

Tacitus (*Agricola*, xii.), speaking of England, says that the soil is fruitful in corn, but not in the olive, vine, and other plants of warm climates; these ripen slowly and quickly sprout, and for the same reason, namely, the humidity of the earth and sky. It is mentioned in many works that the Emperor Probus granted permission to the Britons, as well as to the Gauls, to cultivate the vine; but this proves nothing, for we do not know whether they availed themselves of the permission, and, if so, whether they profited by it. In more recent times, it is known that the vine was cultivated in England. In Strutt's *Ancient England*, chronicles and facts are quoted in proof of this. The county of Gloucester was famous for its vineyards; according to Bede, Guillaume de Malmesbury, the grapes there were sweeter than any others in England. According to Stow's *Chronicle*, wine was made in Windsor Park as well as in all other parts of England. In an ancient manuscript of that date, kept at the castle, may be seen the annual cost of the vine plantation, the account (in the time of Richard the Second) of the vines which were grown in great quantities in the Little Park, as well as of the wine made. A portion of this wine was consumed in the palace, and the rest sold for the king's profit, whilst the duties were paid to the Abbot of Waltham, the incumbent of Old and New Windsor. Strutt gives a figure of an ancient Saxon wine-press. Miller, in the *Gardeners' Dictionary*, says, in 1768, that though few vines are now grown in England, they were in former times very common. This is proved by the fact that numerous places, in many parts of England, derive their names from this circumstance, and that there are acts to certify the extent of ground allotted for vines to abbeys and monasteries. Miller further mentions the attempts made in the neighborhood of London, and it is well known that even now grapes are grown for curiosity or for pleasure in the South of England. These grapes are not always bad, the wine that has been made is not always detestable; though the Chancellor of the Exchequer has no fear for the result affecting the duty on foreign wines entering England, which yields an enormous revenue.

Analogous facts regarding the retrogression of limits of vine cultivation are presented in the northwest of Germany. Meyen states that in the fourteenth century the vine was introduced into Prussia, and that it was cultivated there long since that epoch. M. J. G. Bujach has published in a Kœnigsberg journal an article on the ancient vine culture in Prussia, when that country was under the Teutons. The wine made was acid, and now-a-days would be undrinkable, compared with more southern wines. The climate of the shores of the Baltic, between Dantzig and Kœnigsberg, is not very unfavorable to the vine, and we find that even now it is sometimes cultivated there. Lastly M. Streicher assures me that grapes are not grown now near Cracow, though there are localities named after the vineyards which once grew there.

To return to the present limits of the vine, there are extensive vineyards in Bohemia (notwithstanding the elevation of that country), in Moravia, and more still in Hungary. The chain of mountains called successively Riesengebirge and Carpathians define its limits in that part of Europe, and it does not extend beyond them, except eastwards under the 48th degree. Thence it passes to the province of Bukovina, where there are vineyards in favorable localities, but there are none in Galicia. At Kiew grapes ripen badly and in gardens only, no wine being made. Descending the Dniester, the first vines are met with at Mohilow under the 48th degree, on the Dneiper under the 49th degree, on the Bug under the

47th degree. On the banks of the Don the culture of the vine is extensive from Axais to Tcherkask. On the Volga it is cultivated at Sarepta, lat. 48⅓°, and probably as far north as 50½°.

In Southern Russia it is customary to bury the vines during winter to protect them against the great cold, and the frosts of September sometimes destroy the crop.

In Central Asia vines are grown here and there in low populous valleys. Humboldt mentions their being found in Hamil (lat. 43°), and at Lhassa in 29° 41′. The height and extent of the mountain chains in the centre of that continent are an evident obstacle to this culture. Bunge informs me that vines are grown in North China, in the environs of Pekin, and in great abundance, even as far north as Gouan-gou, beyond which he saw no vineyards; but the plants were everywhere covered with manure during the winter, the cold often descending to 5° Fahr.

In North America, at least in the United States, the Vitis vinifera has wholly failed. It was first attempted by Swiss on the banks of the Ohio, lat. 39°, but the wine was sour, did not keep, and did not pay its expenses, and the vineyards have since given place to corn-fields. Fine but limited crops of grapes are said to have been obtained near Cincinnati, but other attempts have failed; of these the most remarkable is that of Lakanal, who resorted to various expedients in several of the States, changing the localities, plants, &c. Again, Mr. Longworth, of Ohio, pursued his attempts for thirty years with remarkable zeal but no success, and it has been found necessary to use the Catawba Grape, an original wild grape of America, of which 1500 acres are cultivated in Ohio, 300 to 400 in Cincinnati, and about 1000 in Missouri, Indiana, and Ohio. These vineyards are increasing and profitable.

In New Mexico and California the climate is more favorable, and the European vine is cultivated, but it has not been introduced into the more recent settlements, and it is impossible to say what its future limits may be in Oregon.

In the southern hemisphere the vine thrives in Chili, and excellent wine is made to the east of the chain of the Andes at Mendoza, Saint Juan, and La Rioja, but its southern limit is not known. Schouw mentions the vine at Conception under the 37th degree.

Wine of the best quality is sometimes produced at the Cape of Good Hope; that of New South Wales resembles the wines of the banks of the Loire; and in general the dry climates and light soils of Australia are well adapted to vine cultivation. That of Tasmania is too humid.

[In the above *résumé* the extensive vine cultivation of the Northwestern Himalayas, Affghanistan, and Persia is not mentioned. The reported cultivation at Lhassa is open to doubt; Huc and Gabet, the only Europeans who have visited Lhassa, make no allusion to it; and the testimony of recent Himalayan travellers who have questioned the Thibetans upon the subject seems to prove that the climate is much too rigorous and arid.]

[*Note.*—The foregoing excellent article, from the pen of one of the best botanists in Europe, contains much to interest us here in America. That the geographical limits for the cultivation of the "Vitis vinifera" in Europe have been gradually receding from the northwest to the southeast appears to be clearly proven; and that the attempts with the same vine, in all its varieties, in the United States, have thus far been a failure, cannot be denied. With the exception of some parts of California, where it is *said* to succeed, the Vitis vinifera is abandoned for vineyard culture in the United States. About sixty years ago experiments in vineyard culture, with foreign vines, were made in the vicinity of New York,

Philadelphia, Lexington, Ky., and some parts of Virginia; with some promise of success at first; they all eventually failed. Some years later, the good sense of a few persevering cultivators induced them to try our *native vines*, with a better reward for their efforts. *Wine was made*, but not of a quality to please the American palate, and it was for a time abandoned. This may be said especially of the Swiss settlement at Vevay, Ind., established in 1805, where the Schuylkill Grape was principally cultivated, under the name of "Cape" (a misnomer). The vineyards planted on rich bottom lands, instead of the hilltops and sides, did not succeed, and were given up for corn-fields. At length a native grape was found, of great promise—the *Catawba*, from North Carolina. It was first introduced into notice by Major Adlum, of Georgetown, D. C., in 1820, and by N. Longworth, of Cincinnati, in 1823. The latter gentleman, by his untiring efforts in the cause, is justly entitled to be called the "father of successful vine culture in the West." This noble grape is now our principal reliance for wine in the West and Southwest, and is rapidly spreading over the Southern States also. The quality of the wine made from it is too well known to require further remarks, except to say that it is very popular, and readily commands a remunerative price to the producer. That wine-growing in the United States will eventually succeed, as a permanent and paying crop, no one familiar with its present progress can doubt. What are the geographical limits, and where the most favored region within our vast territories, has yet to be tested by experience. We are comparatively but new beginners in this enterprise, and mere learners; but if we do not improve as we progress, it will not be in accordance with the usual sagacity and energy of the American character.

In the varied climate of our widely extended country, some native grapes will be found suited for wine in almost every latitude south of 43°. Thus far, the Isabella for the North, the Catawba for the West, and the Scuppernong for the South, appear to be the favorites. Many other native and hybrid varieties are now being tested, and amongst them superior wine grapes to those now cultivated will doubtless be discovered. We live in an age of progress, and why should wine-growing form an exception?

The grape is now cultivated for wine-making in 20 of the 31 States of the Union, and the following estimate is probably a fair approximation to the number of acres in vineyards in some of the States. Ohio, 3000, about 2000 of which is around Cincinnati; Indiana, 1000; Kentucky, 500; Illinois, 600; Missouri, 700; Tennessee, 200; Georgia, 100; South Carolina, 200; North Carolina, 200.

The mountainous regions of Tennessee, North Carolina and Georgia are thought to be the best parts of the United States for grape culture. Thus far, the vineyards have produced better average crops in Ohio than Missouri. The past year, however, is an exception; in Ohio we shall scarcely average over 100 gallons to the acre, whilst in Missouri some of the vineyards have yielded 1000. One hundred gallons per acre will more than pay the expenses of cultivation. With all the casualties to which the crop is subject, it is found to be as reliable as the apple, our hardiest fruit; and, were it not remunerative, it would long since have been abandoned. R. BUCHANAN.]

Cincinnati, 1857.

# THE SEED, THE STOCK, AND THE GRAFT.

BY WILLIAM MUNDIE, LANDSCAPE GARDENER, HAMILTON, CANADA WEST.

THERE are very few people to whom a portion of good fruit is not both grateful and beautiful, if partaken of with propriety; and there can be but very few, who are in any way engaged in the cultivation of the soil, but will have an interested as well as a pleasurable desire to grow some one or more of the fruits which thrive in our climate.

Fruit also forms (or should form) a very considerable staple in every market; and while its cultivation gives remunerative employment to the growers, it also forms one of the best and healthful of exercises for the amateur. From thus viewing the importance of good and productive fruit-trees to the country generally, I have been led to write the few following remarks, which, if but pointing in the right direction, may be beneficial in drawing attention to the subject.

The propagation and raising of the various sorts of fruit-trees for the stocking of orchards and fruit gardens, is a business of considerable magnitude, and there are few businesses regarding which so much trust has to be exercised by the customer as with the tree grower or nurseryman. A considerable time is required to prove what he has got, and seeing that the price of the trees is not the one-hundredth part of the loss should disappointment ensue.

In the earlier settlement of this country, orchards (as many evidences yet existing testify) had been mostly raised from seeds of the various fruits intended to be grown; many varieties of fruit were thus raised. Indeed, scarcely are there to be found two trees with fruit alike in the older orchards which had been thus raised; yet mostly all were of an inferior quality. Now and then, a tolerably good fruit would be got, arising, probably, from having been cross or hybrid bred between two pure, or nearly pure, original (but different) sorts, the combination of the properties of which were fitted to form a right consistency for a good fruit; but this was chance.

A little later, grafted and budded trees had been introduced—that is, trees grafted or budded with scions or buds (from any good sort that it might be wished to increase) upon a young seedling tree or stock. This process, which is now well understood, most admirably answers the purpose of propagating and multiplying good varieties, with the certainty that they will be identically the same sorts as the parent trees from which the scions or shoots were taken. In respect to general principles of working, this process is complete; but I consider that much has to be learned and observed before we have the full benefit of its very adaptable qualities for increasing and preserving our fruits pure and productive.

In all well regulated nurseries, the different sorts of trees are marked with either names or numbers on the ground where they stand, and, generally speaking, very great care is taken to have the kinds true to the names given with them; and, except from any accidental mistake (which, under the best regulations, will sometimes occur), many, I believe, are worthy of every confidence. But then, these names and numbers only speak truth as to the sorts from which the grafts were taken.

Now, without attributing other defects than those of the present routine of practice, and, of course, a desire on the part of nurserymen and tree growers to raise as large a quantity at as cheap a rate, and in as short a time as possible, I consider that there is a very great oversight in the present mode of propagating and raising fruit-trees, and which, in my opinion, lies in the indiscriminate way

in which the stocks (or seedling trees to graft upon) are raised and used. For instance, in the case of apples, if a cider-mill is near, a quantity of seeds are very readily obtained; but such seeds are probably from fifty or one hundred varieties, most of them having pedigrees, connections, relations, differences, and affinities to others, and to and from each other, inextricable beyond all calculation. They are sown and grown, of course, indiscriminately, and the further probability is, that many of them may be already hybridized with, and allied to, the sorts which will be grafted or budded on them, and presuming that the stock exercises a most decided influence on the graft, and also on the quality of the fruit, but, more especially, on the health and productiveness or unproductiveness of the trees, and that, notwithstanding the goodness or productive quality of the sort which may have been grafted from, such indiscriminate amalgamation as this must be detrimental and deteriorating.

Some practical nurserymen say, that by the root-grafting system, the unsuitableness of stocks to grafts is done away with, from the graft itself rooting into the soil. I am of a different opinion, because I think that the rooting of the graft rather aggravates the difficulty than otherwise, as, then, there will be two distinct sources through which the tree will be supplied with sap, the amalgamation of which may be very injurious to either health, growth, productiveness, or quality. With other fruits which come under the process of budding or grafting (as with the apple), the procedure has been pretty much the same, and need not be enlarged on.

The pear, when budded on the quince stock, has shown us some lessons in the direction aimed at in the foregoing, as many sorts of the pear do not succeed on quince stocks, which, on pear stocks, are thrifty, and good bearers. This can only be attributed to the influence of a stock which is not fitted for them. In other sorts, failures occur on pear roots, but, no doubt, from a similar cause.

By great attention and care in the proper hybridizing and crossing of the different sorts, the French and German growers have succeeded in raising many new seedling varieties, possessing first-rate qualities while on their own roots pure, or when grafted upon suitable stocks, but which also get much deteriorated by being grafted on unsuitable stocks. Many good American seedlings have lately appeared, which, if thus indiscriminately matched in grafting, must share the same fate.

By gathering seeds which may have been hybridized by insects, or in any other promiscuous manner, some good pears may be raised, but only by the merest chance; and the chances against it are manifold.

By a like hypothesis, I have been led to believe that the indiscriminate manner in which seedling stocks are raised, reduces the productiveness, the size, the flavor, and also, in a very great degree, the constitutional health and vigor (or hardiness) of many of our fruit-trees, to be, in a great measure, a matter of chance, dependent as to whether any particular sorts of grafts may happen to have been put upon stocks suited to them; and I suppose there will be but very few who will think otherwise than that their chance of being so placed would be but very slender indeed.

Nurserymen and fruit growers certainly deserve well for having introduced many fine sorts of fruit into the country; whether for self-interest or philanthropy, matters not, as, in either case, the country is benefited. The progress made in propagating has also been great, but, by reason of those oversights which I have been endeavoring to point out, I think we have been (and are yet) working greatly in the dark, and making success more a matter of chance than it otherwise might be.

As a commencement to improvement, the adaptation of properly bred stocks to the various sorts which it may be wished to grow, might be the first aim; and, in

my opinion, the nearer thorough bred (borrowing a term), or bred as nearly as possible in a direct and pure line from the crab-apple, pear, or plum, &c., so much the more likely are we to have success in producing healthy, hardy trees, and clean, handsome, and high flavored fruit. This one branch of the improvement is of itself a great work, and must also be a work of time and experience; but the importance of such a work ought to be sufficient to enlist the united efforts and energies of all who are interested in fruit growing, and who is not?

I have not written the foregoing remarks as pretending to impart any definite information on the subject (in detail), as neither time nor opportunity has been had in order to experiment for that purpose, and the subject is of too much importance for random conclusions. I have only endeavored to point out a problem, the working out of which is of great interest, but which, if properly taken up by nurserymen and horticulturists, may be solved to much advantage, and which, I have every reason to believe, will account for many of the discrepancies and difficulties hitherto experienced with fruit and in fruit growing.

## THE CHARDON POTATO.

BY GUSTAVE HENZE.

For some years past a new variety of the potato, extraordinarily productive, has been cultivated on many farms in the environs of Mans. It is known under the name of "the Chardon Potato," because it was obtained by M. Chardon, a farmer at Griez (Sarthe) in 1846, from a sowing made with seeds purchased at Mans, which had been ripened in Saxony.

The Chardon potato is distinguished from the varieties cultivated either in fields or gardens by the following characteristics:—

1st. Its tubers are long, and rather flat; its skin is glossy and yellow when cultivated in light and sandy soils, and rough and yellowish brown tinged with red, when grown in argillaceous earth. Its eyes are numerous and deeply sunk in cavities; its flesh is of a clear yellow.

2d. Its stems are numerous, strong, and furnished with deep green leaves; its flowers are white, washed with rose, and succeed each other without interruption, from the 15th August to the end of September.

This variety is late, and ripens its tubers towards the end of October. Up to this time (1856) the disease which has appeared every year since 1845, and committed such great ravages upon the late potatoes, has not touched it.

But the Chardon potato is not only an interesting variety on account of its having up to this time resisted the attacks of the disease: it deserves to be propagated because it is without contradiction the most productive potato of all those cultivated upon a large scale.

M. Dugrip, to whom attaches the merit of having been the first to direct the attention of agriculturists, committees, and societies, to this fine variety, has produced, on an average per hectare, twenty times the quantity of tubers planted upon the same superficies; this result is so much the more remarkable that it constitutes the mean return of the culture of 7 hectares 40 ares (about 17 acres 1 rood 9 perches).

In cultures conducted on a smaller scale the returns obtained have frequently been extraordinary. Thus M. Coudray, a farmer in Saint Maixant (Sarthe), has produced from eight hectolitres 220 hectolitres or more than 27 to 1; M. Epinette, a proprietor at Ferté, Bernard, gathered 33 hectolitres, for one; and M. Velmorin has 18 hectolitres for 20 litres, which is more than 90 times the quantity planted. In general the weight of the tubers averages between 150 and 225 grammes (from 4.8 oz.

to 7.2 oz.). This potato will propagate itself very rapidly in France, if it continues to be so productive and remains perfectly healthy; for a great number of agricultural committees and societies have experimented upon it this year (1856), and we strongly recommend the readers of the *Journal d'Agriculture Pratique* to follow this year its divers phases of existence in these attempts, and to take an account of the products they render in the autumn. We wish to believe that it will still furnish an abundant, if not an extraordinary produce, and that we shall be able anew to regard it as a true conquest, a unique variety, as well on account of the beauty of its tubers as of the large proportion of starch they contain.—*Translated from the French of the "Journal d'Agriculture Pratique."*

## VISITS TO COUNTRY PLACES, NO. 13.
## NEW JERSEY.

*Woodlawn*, the residence of Richard Stockton Field, Esq., near Princeton, N. J., presents many attractions, and in none more than in the character of its planting. Mr. Field is an enthusiastic lover of trees and a garden, and, we must say, *has succeeded.* His evergreens will compare favorably with any of the same age in America, both for rapidity of growth and beauty of form. This is mainly owing to a knowledge of how trees should be planted, to preparation of the soil, and to his allowing each specimen ample room. We find cedars of Lebanon, hollies, magnolias, and rare trees, in great variety, grateful for kindness, and rewarding their owner in a manner highly encouraging to the amateur.

Mr. Field has been the proprietor of Woodlawn only about thirteen years. Before the elegant and tasteful mansion was even planned, he began to plant. The house was commenced in the fall of 1854, and completed in the fall of 1856, by Mr. John Notman (Architect), of Philadelphia, and much esteemed as the renovator of Princeton College, to whose judgment in planning, and exquisite taste in finish, it is a noble monument.

Thirty acres are devoted to ornamental purposes, including the gardens and forcing houses, and grounds; the remaining ninety, separated by a road, are employed for farming purposes. In the tree department, Mr. Field pays especial attention to evergreens. The front, on the main road, is planted with white pines; many of these are forty feet in height. He justly thinks this species should never be planted nearer to each other than forty feet, at which distance their branches soon meet. His largest Cedar of Lebanon is now more than thirty feet in height, and though slightly suffering in its leaves from the two late extremely cold winters, is now established, and will make Mr. Field's name remembered for a century or two. There are the following noticeable specimens of which we took memoranda:—

*Fine Balsam Firs, Larches, and Hemlocks.*

Norway Spruces, thirty-five to forty feet.
Cedar of Lebanon, thirty feet; slightly injured the two last winters, but recovering, and assuming its true character.
European Silver Fir, twenty feet.
Pinus Austrica, twenty feet.
Pinus Excelsa, eight feet.
Deodar Cedar, ten feet.
Abies Smithiana, six feet.
Abies Douglasii.
" Washingtonii.
Abies Frazerii.
" Menziesii.
Pinus Pichta.
" Pinaster.
" Pumila.
" Monticola.
" Cephalonica.
Weeping Thuja; fine specimens.
Thuja Chinensis.
" Stricta.
" Plicata.

Very fine specimens of American Arbor-Vitæs, from twenty to twenty-five feet high (standards), and showing not the slightest disposition to lose their lower branches. Beautiful.

Extensive and very fine hedges of American and Chinese Arbor-Vitæs, kept well trimmed.

A large number of remarkably beautiful specimens of Siberian Arbor-Vitæs, from six to eight feet—a plant that cannot be too warmly recommended; it grows wide at the bottom, and should be used for hedges.

Two Prostrate Junipers, on the back lawn, some fifteen feet in diameter, and *most remarkably* beautiful; this plant is too much neglected. These two specimens form *groups* of themselves, and are among the greatest ornaments of Woodlawn.

Juniperus Chinensis.
" Phœnicia.
" Ericoides.
" Excelsa.
" Oblonga pendula.
" Sabina.
Taxus Variegata.
" Adpressa.
" Devastonii.
Picea Nobilis.
English Black Spruce.
American Black Spruce.
Double White Spruce.
Magnolia Acuminata, thirty feet; a very remarkably fine specimen, and very beautiful.
—— Tripetela (many specimens), twenty to twenty-five feet.
—— Macrophylla, fifteen feet.
—— Cordata, twenty feet.
—— Glauca, twenty feet; near the house, and highly ornamental.
—— Auriculata and Conspicua.

Among weeping trees are the following:—

Weeping Ash.
" Sophora.
" Birch.
" Elm.
" Poplar.
" Larch; a picturesque and uncommonly fine specimen of a rare tree.
" Willow; new, and dwarfs.
Purple Elm.
" Filbert.
Purple Sycamore.
" Beech.
Large-leaved Lime.
Fern-leaved Beech.
Crested "
Cut-leaved Alder.
Buddlea Lindleyana.
Chinese Jingko Tree.
Some very fine Willow-leaved Oaks.
Juniperus Squamata, a remarkable specimen.

Many of Mr. Field's fruit-trees have been moved half a dozen times, but they always seem to have thrived under the operation.

Mr. F. is thorough in whatever he undertakes. The grapery is in the finest condition. The chicken-house produces one hundred pair of the finest breed each year. We cannot mention a single place in the Union with more commendation than Woodlawn, where hospitality reigns supreme, and the character of a good planter is most amiably combined with that of a celebrated lawyer, President of a *good* Bank, an active member of the New Jersey Historical Society, and a most genial host; need we add that here is found a good library, and that, in his open-hearted manner, he admits himself a pupil of Downing and the *Horticulturist*? Mr. F. is a grandson of Richard Stockton, one of the signers of the Declaration of Independence.

Our "Visit" has extended itself over so large a space, that we shall be compelled to give another page or two to Morven, the family residence of the Stocktons, and others in the vicinity of classical Princeton.

## NEW PLANTS.

ACHIMENES GHIESBREGHTII.—Presented to the Horticultural Society by Mr. Andrew Henderson, of the Wellington Nursery, St. John's Wood Road, in 1849.

Stems erect, deep purple brown, with a few scattered hairs. Leaves opposite, stalked, oblong-lanceolate, rugose, convex, coarsely serrated, not unlike those of the larger stinging-nettle. Flowers solitary, axillary, with a slender hairy peduncle, twice as long as the leafstalks. Calyx smooth, equally five-parted. Corolla

deflexed, nearly cylindrical, gibbous at the base on the upper side, one inch and a half long, bright scarlet, with an oblique regular limb, and a circular throat. Disk a lobed fleshy ring. Stigma large, two-lobed, very hairy.

This is a neat, distinct, and rather slender kind, requiring the same treatment as the old *A. coccinea*, and easily increased by the small scaly rhizomes. It grows about eight or ten inches in height, and flowers from June to August. It is very handsome.—*Horticultural Society's Journal.*

GALPHIMIA GLAUCA.—Sent first from Mexico by Mr. Hartweg in 1837.

A beautiful shrub, easily kept in the form of a bush. The leaves are a deep bluish-green, ovate, obtuse, glaucous on the under side, and furnished with a pair of glands on the edge near the base. The flowers, which are golden yellow, appear in close terminal racemes, between three and four inches long in strong plants. Each has five distinct petals, with almost exactly the form of a trowel.

It is a very desirable species, as it flowers during the latter part of the autumn.—*Horticultural Society's Journal.*

LEPTODACTYLON CALIFORNICUM. Nat. Ord. *Polemoniaceæ*.—Native, as its name implies, of California. Mr. Douglas was the first to introduce it to notice. Stem dwarf, and numerously branched. Branches covered densely with small, beautiful foliage. Leaves cut nearly to the base into seven awl-shaped, hairy segments, mucronate. Calyx hairy, tubular, cylindrical, divided rather deeply into five subulate teeth. Corolla hypocrateriform; tube very slender; limb large and spreading, divided into five wedge-shaped, sometimes irregularly toothed lobes.

This is quite a gem of its kind, producing a rich profusion of brightly-tinted flowers in spring and early summer. Indeed, the number of blooms is so great as to quite eclipse the diminutive foliage, and hide it from view. Its habit is dwarf and very handsome if well grown, and its culture is moderately simple.

SABBATIA CAMPESTRIS. Nat. Ord. *Gentianeæ*.—An annual very little known as yet, from the Arkansas Territory, where it was discovered by Mr. James Drummond, inhabiting the prairies. It has also been detected in Texas and New Orleans. It grows from four to six inches and upwards in height; the corolla large and handsome, of five segments, of a deep rose color, with a pale yellow centre, measuring about two inches across; the leaves are opposite, obcordate, and sessile, about three-quarters of an inch long, of a light green color. Seeds require the temperature of a hot-bed.—*Bot. Mag.*, 5015.

SALVIA CANDELABRUM. Nat. Ord. *Labiatæ*.—A hardy suffruticose Salvia from Spain, where it grows at an elevation of 2500 to 3000 feet above the sea level. The flowers are of medium size, white, or pale sulphur, with the lower lip of deep rich violet, variegated and streaked with white in the throat, borne in a cyme somewhat regularly disposed, which has given rise to the specific name. The whole plant is rather hoary, very leafy, and exhales a strong aromatic scent.—*Bot. Mag.*, 5017.

## AN AMATEUR'S WANTS.

AN amateur who has an abundance of Fuchsias, Balsams, Geraniums, Cinerarias, Petunias, &c., and wants something better for his greenhouse, may indulge his fancy with Camellia Japonica, Azalea Indica, Epacrises, Acacias, Cestrum aurantiacum, Boronias, Ereostemons, Veronicas, Andersonii, and others, Abutillons, Platycodons (double white, double blue, and the single varieties), Chorozemas, Ericas, all showy in bloom and pretty out of bloom (except the Platycodon, which dies down to the root and comes up again like Asparagus), and the foliage of which is varied and handsome.

# HYBRIDIZING THE GRAPE.

BY AUGUSTUS D. ROGERS, SALEM, MASS.

OBSERVING, in some of the late numbers of your invaluable *Horticulturist*, that an interest is awakening in the important results from hybridizing grapes, and also, in an article on the "Delaware," that "the efforts of the hybridizer are yet to be heard from," allow me to send an account of the result of an experiment undertaken six and a half years ago by my brother, Mr. Edward S. Rogers, in our garden of about half an acre or more. He had before experimented on pears, in a small way, according to the directions given for the cross-breeding of plants in Downing's "Fruit-Trees of America," but was stimulated to try this experiment from perusing two articles in the September and October numbers of the *Horticulturist* for 1847 and 1848 (by the celebrated Dr. Lindley), taken from the London *Horticulturist*.

The Isabella (seldom ripening in this northern latitude unless in very favorable situations) and the Diana being only a little earlier, it was desired to obtain grapes combining the hardy and early fruiting qualities of the native with the rich and delicate flavor of the foreign species, which could be grown here in the open air, needing neither aid of glass, sulphuring for mildew, or winter protection, and unlikely to be cut off by the early frosts of autumn. For this purpose, a four or five-years' old seedling, growing in the garden, from the New England wild species, Vitis labrusca, was selected as the female parent of the intended hybrids. It is known here as the "Carter," or "Mammoth Globe." Bunches, small, containing from four to eight or nine berries, some of them very large, an inch or more in diameter; in shape, much flattened. Skin, rather thick. Color, brownish-red. Ripe about the 1st of September, of agreeable flavor, and superior to most of this species. The Black Hamburgh and White Chasselas, or Sweetwater (Vitis vinifera), had been arranged as the other parent, in a cold grapery near by, to be simultaneously in bloom with the native. When the blossoms on the native vine *had begun* to open, a few clusters were selected, on which to operate, from among those most forward and *nearly ready to open.* All but five or six flowers were then cut away, and with a pair of scissors, the cap (corolla) of each carefully removed, and stamens all cut off, thus (before their surrounding anthers were quite ready to scatter their own pollen) preparing the pistil for artificial fertilization with the foreign varieties. This was performed by touching the stigma of each pistil thus exposed, at *the moment of taking off the cap or petals*, with fresh pollen from the anthers on a bunch of the foreign kind, already at hand. Each bunch thus operated on, was immediately covered by a small, fine, cotton bag, to prevent access of the pollen of the vine itself, or any floating in the air, or liable to be carried about by bees, or otherwise. In order to be *more sure* of the fertilizing action, a foreign bunch, in full bloom, well covered with pollen, was additionally placed therein, and the bag tied up. A day or two afterwards, each bag being taken off, and every stigma again carefully retouched, and a fresh foreign bunch again inclosed with every cluster, all the bags were again tied up, to remain for two or three weeks. When again reopened, grapes about the size of peas, generally, were found, on every cluster, to have set finely, in growing order, and were left to take their

natural course upon the vine, each bunch having been previously marked for identity. The bunches, when ripe, were carefully preserved till late in the fall, the seeds of every grape then taken out, and planted in the garden, within a frame-work under cover of leaves and boards. They came up regularly, as planted, the next spring, nearly every seed vegetating; but only about one-third (forty-five) of the infant plants could be saved, by daily care, from the ravages of the cut-worm. They were then left to grow, uprightly trained on poles for three or four years; then half the number or more thinned out, and transplanted, being consequently retarded somewhat in their growth and vigor.

In order to ascertain as soon as possible the result upon the fruit, the vines (not knowing whether they would be hardy) were laid down, and covered every winter after bearing. To test their hardihood, precaution being taken to save cuttings, the whole forty-five were then left as growing upon bean poles, totally exposed and unprotected, throughout the winter of 1856–7—the coldest ever known here, the thermometer, for several successive mornings, ranging from 20° to 25° below zero. The whole untransplanted row (twenty in number) stood untouched and *perfectly hardy;* about one-half of the twenty-five in the other row stood the same, and the other half lost most of their bearing wood, the surrounding Isabellas and Dianas, of older and stronger growth, suffering likewise; but none two or three feet above the surface of the ground, were at all affected.

As *evidence* of the hybridization of these vines among them, more or less, is discernible the intermixture or blending of the *peculiarity of the foliage and wood* of the different species of their parents, some, showing that of the native leaf, round, and slightly serrated, and the woolly under-surface, and bristly, wiry wood; while others, the greater number, inherit more that of the foreign leaf, with its deep lobes and serratures, and green, smooth under-surface, and large, smooth, short-jointed wood, with prominent, full buds.

In the *fruit*, also, traces of the intermixture of the *two* species are obvious in shape, color, size, and flavor, some partaking more of the *one*, and some the *other* —those of the Sweetwater variety, however, seeming more uniform than the Black Hamburgh.

The *blossoms*, too, of these hybrids indicate the different peculiarities of their respective parents, some having the long, perfect filaments belonging to the foreign as, also, to the Isabella, Diana, and Concord varieties (setting their fruit better, and in more abundance from this cause, as far as noticed), and others, the *very short filament* of this native, which, though blossoming in profusion, with large flower clusters, bears fruit comparatively small in quantity and size of bunches.

The mildew, making its appearance on some of these hybrids (in a mitigated form, however), also significantly points to their foreign intermixture. Its effect, last season (an unfavorable one), was immaterial upon the foliage only; the past season (the most unfavorable one ever known here), the foliage of a few suffered considerably, in common with the Isabella and Diana, and, in a few instances, the fruit of some was attacked slightly. It may be observed that, from want of using any of the precautions mentioned in this process of hybridizing, "people may fancy they have obtained hybrids when they have gained only natural seedlings."

The result of the foregoing experiment—the only one, it is believed, on the native species of New England—would not seem fully to confirm Dr. Lindley's inferences from the experience, on other plants, of the best English authority, the Dean of Manchester, "that, as a general rule, the properties of the male parent will be most conspicuous in the hybrid," but leave an inference that the properties of one parent may be as conspicuous as those of the other, the evidence, however, perhaps slightly preponderating in favor of the rule.

In the October number of the *Horticulturist*, the Georgia Committee, in their report on grapes, say: "As Le Conte observes, 'although, among some families of plants, hybrids occur naturally, or may be formed artificially, yet it is difficult to understand how this can be the case in the genus Vitis,' &c., and that this process of hybridizing the grape is impossible, 'on account of the minuteness of the flower and the parts of fructification,' he might have added another difficulty: the petals are caducous, and cohere at the tips, forming a little cap, which, in the act of falling off whole, draws over, from one side or the other, almost invariably, the pollen from its own stamens upon the pistil. The chances then are that the operation on so minute a flower, in the act of removing this cap and the stamens, would have already fertilized the pistil before applying the pollen of the species or variety selected. We would not, however, assert that hybridization, naturally or artificially, is absolutely impossible, but nearly so."

From the result of this experiment, the opinions of Le Conte and the Georgia Committee, it would seem, must be conceded untenable, and the "other difficulty" obviated, if it is considered the cap and stamens should be artificially removed *before the anthers are ready to burst*, dispersing their pollen. Even, as we have usually noticed in many operations, when the cap naturally falls off, the anthers *do not* burst *immediately*.

It was the opinion of some very noted grape growers, although they and some learned botanists at once, from examination, pronounced these vines hybrids, that many would turn out staminate and totally unproductive plants, and the opinions of others, as, also, a writer in the December number of the *Horticulturist* remarks, the experiment would not succeed, for the reason that "there may be physiological peculiarities which often forbid the intermixture of as closely allied plants as the different species of grapes."* All these objections seem put to rest by this experiment, the whole number of vines (about twenty-five) which have shown blossoms having generally set their fruit well, and many in the highest degree of perfection. (*To be continued.*)

[*Remarks.*—When we wrote that "the efforts of the hybridizer were yet to be heard from," we meant that a grape adapted to general cultivation, raised in that way, had yet to be introduced. We are glad that our friend misunderstood us, as it has brought forth the above statement of valuable experiments, which will be read with interest by many. The conclusion shall be given next month.

The great barrier to the successful cultivation of the foreign grape in the open air, is not so much a want of hardiness as its liability to mildew. When planted on a dry soil, as all grapes ought in any case to be, the foreign grape will stand very nearly as much frost as the native kinds. In cases where it is killed, the Isabella and other native grapes generally die also. In those parts of the States where the temperature is more regular, or where the changes from a very dry to a moist atmosphere are not sudden or extreme, and, consequently, the causes which are known to favor mildew do not exist, the foreign grape can be ripened with fair success. In the region of Seneca Lake, and in many parts of Canada, there is little difficulty found in ripening it, notwithstanding the severity of the Canadian winters.

Of all the foreign grapes, the Golden Chasselas seems less liable to mildew when grown in the open air than any other we have seen tried, and we would recommend it as one of the best to experiment with in hybridizing.—Ed. H.]

* That this opinion is incorrect, *see*, also, the results of an experiment on the Isabella, a native of a Southern species, by I. F. Allen, Esq., Salem, Mass., in an article by Rev. J. L. Russell, in *Proceedings of the Essex Institute*, vol. i. p. 195, 1854.

# EDITOR'S TABLE.

REPORTS OF THE MASSACHUSETTS HORTICULTURAL SOCIETY FOR 1857.—It is really refreshing to peruse the reports of the Committees of this Society; one values the information of men who have a single eye to the dissemination of truthful facts. In these reports, we find the opinions advanced in the *Horticulturist* ably sustained, and, with one exception, we agree in the estimates of the new fruits. We shall briefly recapitulate, the sheets of the report having been kindly sent by Mr. Eben Wight, in advance of their publication.

The Committee on Gardens have visited extensively, and their report is lucid and full; that on flowers is also able. They enter their decided protest against the use of flowers as glutinized ornaments of wooden boxes, moss-covered crosses, anchors, eagles, and all that *so-called floral* designs. "Name the abortion what you will," they say—"design, if you please—but do not associate flowers in such a connection by calling it *floral*." Good advice.

The plants commended are Styphelia tubiflora, Phaiis grandiflora and maculata, Eriostemon cuspidatum and verifolium, Kennedia monophylla variegata, Cytisus monosperma, Orange Rhododendron Javanicum (*said* to be hardy), and a fine new Correa, Ne plus ultra; a new white verbena, Annie alba, took the prize for the best new seedling; second, a new blue, raised by Thomas C. Whytal, and a curiously marked variety raised by W. C. Strong. The Yenadesse is a decided novelty. Mr. Joseph Breck has done himself great credit by this report, as well as by his general enthusiasm and excellent garden. He exhibited two seedling Tropæolums, named Breckii and Randii. Various other novelties are commemorated, for which we must refer to the Report.

*Fruits.*—Analyzing the reports on fruits, we find the season had been unpropitious for apples, cherries, and pears, many trees of the latter (such as the Bartlett, Louise Bonne de Jersey, Beurré Bosc, and Marie Louise) being killed to the ground, other varieties being uninjured. The Committee truly say: "Probably no city in the Union is so highly favored as is our own in the number of enthusiastic horticultural amateurs, who make the subject a pleasure, looking after, closely watching, and encouraging the growth of fruit-trees planted by their own hands during leisure from business." We wish their good example might greatly extend.

Mr. John Gordon, of Brighton, has four acres deeply trenched and under-drained, entirely covered with pear-trees grown for market; about two thirds are on quince. He finds a ready sale for those having a reddish or russety skin, while those of a green skin could not be disposed of. All his fruit is carefully gathered by hand, and some four days before designing to market it, he takes his fruit boxes (about twenty inches square, and six or eight deep), and places some woollen substance over the inside bottom; he then places a layer of pears, and then another of woollen, and another layer of pears, covering the whole with woollen. In no case does he pack more than two layers of fruit, which is then allowed to go through a *sweating process;* this gives it a rich coloring, suited to market. Cotton would not ripen them so fast, and woollen leaves a finer blush on the skin. Worth remembering, truly; for while Mr. Gordon's Bartletts were yielding him ten dollars a bushel, other wagons by the side of his, had pears of the same variety, equally as large, but, in conse-

quence of retaining a green skin, were offered at three dollars per bushel. *Thorough underdraining is essential* for a fruit garden. Again: Red apples, on a yellow or russety ground, command a good price for the table, when it would be difficult to dispose of those having a green skin. Sweet apples also command a good price during winter.

Apricots and plums have proved an entire failure, and will have to be abandoned on account of the injury from the curculio.

The Dorchester Blackberry is pronounced superior to the Lawton, except for small gardens, where they can be readily picked, and such as are ripe selected. The Dorchester is larger, and bears carriage better, say the Committee.

To get a good crop of blackberries, it is absolutely necessary to train the stalks horizontally, in order that the shoots may break at every eye, while, if allowed to grow upright, they only break at the top. The third year after planting gives a full crop.

*Cherries.*—Awards were given for the old varieties, Black Eagle, Black Tartarian, and Napoleon Bigarreau. Dr. Kirtland's cherries are commended, and are being introduced.

*Currants and Figs.*—The White and Red Dutch were the best grown, and the Victoria was nearly equal. W. C. Strong made a liberal display of new varieties; the best are Circassian, Red Grape, Versailles, and Macrocarpa. Some figs ripened in the open air, are noted.

*Gooseberries.*—C. Downing's seedling, and another by the Shakers of Lebanon, and one from Mr. Smith, of Vermont, all give good promise.

*Grapes under glass*, in great abundance, have been exhibited during the year. Mr. J. F. Allen's report on his hybridized seedlings, is not very encouraging. The question of the identity of the Prince Albert and Barbarossa, Mr. A. thinks settled.

*Grapes—Open Culture.*—The prospect for field or vineyard culture of grapes in Massachusetts, is not flattering. Catawba and Isabella, except in the most favorable locations, do not hold out much hope of success; and hence we may account for the Committee's differing with us regarding the Concord, which they recommend somewhat. The Rebecca succeeds, and is popular, being considered "one of the most valuable grapes for out-door culture ever introduced among us; so easy of propagation, that from one dozen vines, in the fall of 1856, a person assures the Committee he should have ready potted for sale, 3,000 vines for the spring of 1858." Not so the Delaware, which proves most difficult of propagation, either from eyes, cuttings, or layers; but it is "one of the most valuable not only for its earliness of ripening, but for its hardiness in withstanding almost any degree of cold, while the Diana was killed to the ground, and the Isabella destroyed root and branch. Compared with others, the Delaware was less subject to mildew.

The Committee next startles us with an account of the Union Village Grape, which is compared to the Black Hamburgh in value. "It has not the consistency of the latter, while it possesses a sweetness at once distinguishable by the most common observer. It is one of the most rampant growers, and Mr. Bracket *claims* that it will ripen as early as the Isabella." Berries, this year, larger than the average of B. H., for which fruit it was mistaken; more time and experience are required before an authoritative opinion can be given. The Logan Grape we have spoken of elsewhere. Mr. Bracket thinks the Concord will make a fine brown sherry wine, and assume great importance; and, he adds, that Union Village should have a light, sandy, or gravelly soil.

*Pears.*—The Beurré Superfin, figured some time since in the *Horticulturist*, promises to become a valuable variety; Beurré Sterckman, very handsome; Abbott, another very excellent native pear; Henkel, of great merit; St. Michael Archange, large and fine; Merriam, of remarkable excellence; Supreme de Quemper, from Messrs. Hovey, proved one of the best early pears—quite equal to the Doyenné d'Eté, and much larger; Beurré Clairgeau is likely to prove equal to its reputation when the trees are more advanced. Age is undoubtedly required with this as well as many other pear-trees, to establish the true qualities.

*Raspberries.*—Dr. Brincklé's Orange is the favorite. The Catawissa has been grown by Mr. Breck, who has a highly favorable opinion of it; but there has been no exhibition of the fruit in Boston.

*Strawberries.*—The Lyman plate (value, fifty dollars), the previous year was awarded to Isaac Fay, for the Jenny Lind; but no distribution is made this year. The best shown, this season, has been Sir Charles Napier, by Messrs. Hovey.

The entire report is of interest, and we cannot close our condensed account of it (which embraces the leading facts) without again expressing our wish that the knowledge and enthusiasm of the Bostonians may rapidly spread.

Mr. Cabot, on retiring as President, received a present of plate of the value of one hundred and fifty dollars; and Eben Wight, Chairman of the Committee on Fruits, plate to the value of one hundred dollars. Josiah Stickney was elected President.

*Fruit Growers of Western New York.*—No official report of this meeting had reached us in time for this number.

*Ohio Pomological Society.*—The same may be said of the *Transactions* of the Ohio Society; of both we shall give the substance soon.

*The Patent Office Report* on Agriculture contains some matters of interest to our readers, and to agriculturists, and cotton planters, especially—is valuable. As usual, it is carelessly printed, and on very poor paper.

*Dexter Stone's Verbenas*, with new and valuable additions to his stock, are advertised this month. We indorse all he says.

---

Experimental Gardens.—A correspondent, whose suggestions we always value, asks us if the idea of an experimental garden is given up, and why. To this the answer is easy. In an early number of our labors, the topic was discussed, and made its impression, but, so far, it has resulted only in the conviction of the propriety of such an effort, which, we are happy to know, is gaining ground. The triumph which such a plan, properly carried out, would give to any one of our great cities, can scarcely be appreciated, any more than the benefits to the public. It would afford an example which thousands—aye, hundreds of thousands—would annually visit and profit by. It is not to be put down by a cynical frown. Things barely of use are subjects for professional skill and scientific inquiry; they must also be beautiful and pleasing, to attract common attention, and to be naturally and universally interesting. The progress of civilization and refinement is from instrumental to final causes; from supplying the wants of the body to providing luxuries for the mind. To stop at the *mechanical*, and refuse to proceed to the *fine arts*, or churlishly to reject all ornamental studies and elegant accomplishments as mean and trivial, because they only afford employment to the imagination, create food for thought, furnish the mind, sustain the soul in health and enjoyment, is a rude and barbarous theory.

It has been said that an experimental garden would injure the business of the nurseryman. This is on a par with the old axiom, now utterly exploded, that machinery injures labor. It would be exactly the reverse. The education which its visitors would receive at every visit, would create an immense demand for what is now only sold occasionally.

We are sure that the intelligent portion of the trade would not only *feel* an interest in such a project as we are advocating, but we know many that would *take* an interest and shares, and by every means in their power assist it. It is just such means combined as they possess that we want, to make a perfect thing.

We have heard a poor painter decry the introduction into America of the finest works of art. "Let us," he said, "encourage our own painters first!" But this cannot be until a taste for good pictures is taught by excellent examples; there will be no taste, and painting will forever be in inferior hands, because (there being no educated taste) there can be no

demand for excellence. A man who has frequented the Dresden Gallery, will detect at a glance a miserable daub, whether he see it in Italy or his own parlor. It is so in gardening. Those who have never seen a fine garden, or acquired a love for fine and various trees, are content all their lives with inferiority, because their taste has never been stimulated or educated.

Nature is not limited, nor does it become effete, like our conceit and vanity. The closer we examine it, the more it refines upon us. It expands as we enlarge and shift our view; it "grows with our growth, and strengthens with our strength," and our capacity is invigorated as it is called out by occasion and necessity. He who does nothing, renders himself incapable of doing anything; but while we are executing any work, we are preparing and qualifying ourselves to undertake another. The principles are the same in all nature, and we understand them better as we verify them by experience and practice. Expenditure of intellectual wealth makes us rich; by lying idle as by standing still, we are confined to the same trite, narrow round of topics. By continuing our efforts, as by moving forwards in a road, we extend our views, and discover, continually, new tracts of country. Humanity rusts for want of use.

The application is this: We can name more than one horticultural society whose exhibitions no longer pay expenses; the public have become satiated with the repetition of the same repasts; they want *something new*, and something new they will have. The exhibitions have educated the public up to a certain point; we now want *progress*. We should show them what can be done; what beauties can be developed in a garden; *out of doors* exhibitions, and a band of music, amid the best productions of trees, flowers, and lawns. With these, horticulture, arboriculture, floriculture, would make new strides in our country, learn to *run*, and not *walk* lazily along as is now fearfully the case. As soon as one of our cities shows an experimental garden properly founded, it will be the fashion everywhere, just as it was only necessary to show one example of a good rural cemetery, to introduce them all over our land. The city that first takes the lead, will be the most benefited; the stockholders will reap a rich reward in the rise of their land, and so forth, and all will ultimately acknowledge it a better, more useful, and more profitable scheme—more educating than a dozen Academies of Music, however valuable they may be in their place. If it should even prove partially unprofitable, in a pecuniary view (which, with judicious management, it would not), that man or that city which founds it, will be a public benefactor.

Josiah Stickney, the new President of the Massachusetts Horticultural Society, said in his speech on his election:—"I look also to the establishment of an experimental garden, whenever our means may permit, and circumstances favor it, as one of the best and most effective means of promoting the objects of the society, and one that should never be lost sight of."

---

Feeding Bees.—Bees should always be considered as natives of a warm climate, by which means we can account for their ways being opposed to their own security. Instead of their keeping together in a strong colony, they break off into small ones, and are thus weakened and rendered unfit to collect sufficient store for winter. The exact quantity of food requisite to keep a colony in good condition during the winter, is not easily fixed: 10 lbs. and 15 lbs. have been named, but we think that the latter quantity is the safest; and if it reach 20 lbs., so much the better; still, colonies short of the first quantity named should be fed, and the hives made snug for winter. The less room bees have during that time, the better for their health; for all the combs that they do not cover take more or less harm, and the pollen is rendered unfit for use in the spring; consequently, all communication should be closed from any extra room given to the hives in summer, and their doorways lessened or closed, except a few small holes for air. In general, we prefer the latter, for the instinct in

bees is still obedient to the laws which govern the climate whence they originated, and, consequently, many of them are deceived by the warmth of a winter's sun, sally out, and are either picked up by birds, or perish in the snow.

---

Weeping Roses (which are vigorous growing varieties, worked five to seven feet high) merely require the gross unripe shoots, and those which are overcrowded to be taken out, and the others left unpruned. These, for the first year or two, should be trained round a small iron hoop, placed underneath the head of the plant; in a short time, they will form most beautiful pendulous trees, requiring little or no pruning.

---

Gardening.—There is a pleasure in a garden which none but gardeners know. From the moment you love the art, and look nature in the face, you are at peace with your own heart; you have no absurd opinions to combat, no point to strain, no adversary to crush, no fool to annoy. You are actuated by fear or favor to no man. Patience grows out of the endless pursuit, and turns into a luxury. A streak in a flower, a wrinkle in a leaf, a plant in perfect health, gives us enjoyment for another half day. The hours pass on untold, without chagrin, and without weariness; nor would you ever wish to pass them otherwise. Innocence is joined with industry, pleasure with business, and the mind is satisfied.

*Experimental gardening* is, undoubtedly, the backbone and marrow of the craft. The gardener who makes no experiments, says a late writer, is not worth salt to his porridge.

---

Those American Fruits.—The reports from the American fruits at the London Horticultural Exhibition, are not all *couleur de rose*. The *Cottage Gardener* is particularly offensive in saying: "The American pears looked as if they were from the sea-shore to the west of Liverpool, where they were starved in sand, roasted by a burning sun, and salted by the sea-spray. The pears from Nantes were much better, but not nearly so good as our English pears." This is bad enough, to be sure, but we must put a little of it down to prejudice, and a great deal to the voyage.

Notwithstanding the above, the best 70 or 80 of these pears were sent to Windsor to the Queen, and Messrs. Hovey have received the large silver medal, through the United States minister, for the collection.

Other Fruits.—The same journal says: "The finest Medlars in the country were there, and, also, the 'Prickly Pear' of the South of Europe—a very wholesome fruit, which makes a beautiful dish in the dessert. This is the fruit of the common *Opuntia vulgaris*, and the 'Indian Fig' of ordinary travellers. There were also purple Guavas and Shaddocks from Sion House, together with the rarest fruit in England, the Chocolate fruit, which is the chief ingredient in 'that excellent cup of chocolate.' The Chocolate-tree (*Theobroma cacao*) is a most beautiful-leaved tree, with flowers as insignificant as those of the Black Currant, and not unlike it. The flowers come in short, dense clusters from the old wood, and the fruit is about six inches long, pointed at both ends, otherwise egg-shaped, and slightly ribbed. The shell is of a light color when ripe, and splits open at the end furthest from the stalk. The seed or fruit is inclosed in a white pulp, from which strong whiskey is distilled in South America."

There was a fine dish of the ripe fruit of the *Benthamia fragifera* (huge strawberry-looking fruit), from Mr. Cox, gardener to W. Wells, Esq., Redleaf, Kent, which was gathered from a standard in the open air—another proof of the extraordinarily fine season we have just gone through. Also, from the same, a beautiful dish of the *Cape Gooseberry*, in their finely-bleached envelops. This is *Physalis edulis* of botany. The seeds are sown early in the spring, and the plants are fruited in the greenhouse.

South Carolina Productions.—We are indebted to the Hon. William Elliott, of Colleton District, S. C., for fine examples of some Carolina productions. The sweet potato is very superior to that of the North—sugary, and of a better taste. It should constitute an article of large export. The Palmetto cabbages were extremely good, differing slightly from the cabbage of the Royal Palm, in Cuba, and with what Mr. Elliott calls a "wholesome bitter, like that of matrimony!" The pomegranates were large, and remarkably fine. Considering in what perfect order all these things reached us, the wonder is that our cities connected by steam receive so few of them. We suppose cotton is more profitable.

---

Dioscorea batatas.—In reply to Mr. Fall's invitation to others to communicate their experience of this vegetable, we have several communications, favorable and unfavorable, and shall endeavor to give a summary next month.

---

Boston, January 11, 1858.

Mr. J. Jay Smith: I feel moved to express to you my pleasure not only in the opinion you gave, in the December *Horticulturist*, of the Concord Grape as compared with the Isabella, but in the two remarks you so nicely tucked in (and so decidedly, too) in the clause on the Concord Grape, in the article on "Grapes" in the January number of the *Horticulturist*. I will say no more, at the present time, than to express my regret that new plants should be sent out, from time to time, so misrepresented as they are, and two of the most notable instances recently occurring not abroad, but at home. Respectfully, Solon.

---

The traveller among the Alps is annoyed at every celebrated scene with applications and solicitations to pay for some appliance he has never anticipated. On the Wengern Mountain, you are desired to pay five francs *for an avalanche!* and soon discover that a gun is loaded, to bring down the snow by its reverberating influence, and that on no other terms can you enjoy the spectacle. De Quincy relates a similar charge made during a tour in the lake region. The bill contained this uncommon item:—

| | |
|---|---|
| "To an echo, first quality . . . . . | £0 10s. 0 |
| "To " second quality . . . . . | 0 5 0 |

It seems the price of echoes varied, reasonably enough, with the amount of gunpowder consumed. Half-crown echoes might be had by those base snobs who would put up with a vile substitute for the genuine article.

It is computed there has been 37,000 Americans in Europe the past season!

---

Michigan Transactions.—The indefatigable and useful Secretary of the Michigan Agricultural Society, Mr. J. C. Holmes, has forwarded us the *Transactions* of the Society for 1856, making a portly octavo of nearly eight hundred pages. It is full of interesting matter, of a practical kind, some of which we shall copy when we are less crowded than at the present time.

---

Mr. Simpson's Grape Method.—The report of the Committee of the Massachusetts Horticultural Society assures the world that Mr. Simpson's two-crop system of cultivating grapes under glass, has proved successful. "The time to ripen grapes averages from four and a half to five months; and thus leaving a month for the ripening of the wood, a crop might be matured every six months. Mr. S.'s practice, however, is to allow the vine to grow naturally, without forcing, every other year, thus preventing any exhaustion which might ensue from continued forcing. The vines grown are Syrian, Hamburghs, Muscats, Black Prince, Zinfindal, Frontignans, and Macready's Early." The Committee on Gardens give high praise to Mr. H. H. Hunnewell's, as well as to his gardener, Mr. Harris.

NOTES FOR THE MONTH.—We trust that practical persons interested in gardening, peruse regularly the "Calendars of Operations" (now called "Notes for the Month") which close each number of our monthly records. They are original essays, by able penmen who have a love for the subject, and are not repetitions month for month. Mr. Buchanan, as a writer on grape culture, has no compeer; and we have yet to meet with the man who has more useful and practical knowledge for the purposes of an adviser in the garden and greenhouse than Mr. Saunders.

---

THE LOGAN GRAPE.—Mr. A. Thompson, of Delaware, Ohio, writes a highly favorable account of a new native grape called the Logan. It is a black grape, ripening before the Catawba, and preferred to the Isabella, and is believed to be a wilding of Ohio; hardy, vigorous; wood, short-jointed and compact; distinct in wood and foliage, productive, and probably the earliest hardy grape of fair quality in cultivation, and will ripen its fruit several degrees further north than the Isabella and Catawba.

---

HEAT, VENTILATION, RAIN.—In the best plant houses, the pipes for heating the building are placed immediately fronting the ventilators, in the basement wall, so that all the air admitted into the house from below, must necessarily pass through, or come in contact with, these heated pipes, and, therefore, that great *desideratum* in ventilation, a circulation of warm air, is easily effected. This very important and highly necessary precaution should never be lost sight of by the architect in constructing horticultural buildings, too many of which, and even very modern ones, are built and ventilated without the least provision being made for warming the air admitted into them by the ventilators, and without a proper circulation of this in some way or other, no plants will flourish. Live they may; but when partially deprived of pure air, they only linger out their lives in a pallid, enervated, and undeveloped state, more of a disgrace to an establishment than a decoration. And let the opponents of a more free circulation to tropical structures bear in mind that even the most sultry forests, swamps, and savannas of the tropics abundantly afford to plant and animal life that which many a modern cultivator of exotics almost denies; for instance, nearly all our richest and most delicate Orchids inhabit regions in which, for nine months in the year, Aquarius is in the ascendant, and almost unremitting rains prevail.

Everything depends on beginning right. In some plant and forcing-houses which we inspected lately in Philadelphia, the whole cost—and most extravagant was the outlay—has been thrown away by the absurd manner in which the work was executed. The costly hot water pipes in the grapery are useless for forcing, because of the openness of the glazing; the glass in extensive forcing-pits is so awkwardly glazed in wooden rebates, that when a pane is broken in the top or middle, all below it have to be forced out to replace the damage, and much time is lost, as well as glass broken, in the operation. It is no doubt the fact that the charge made by experienced superintendents of glass structures is as important a saving, as the percentage of an architect in the building of a house mostly proves an economy. Let no one attempt a glass structure without good advice.

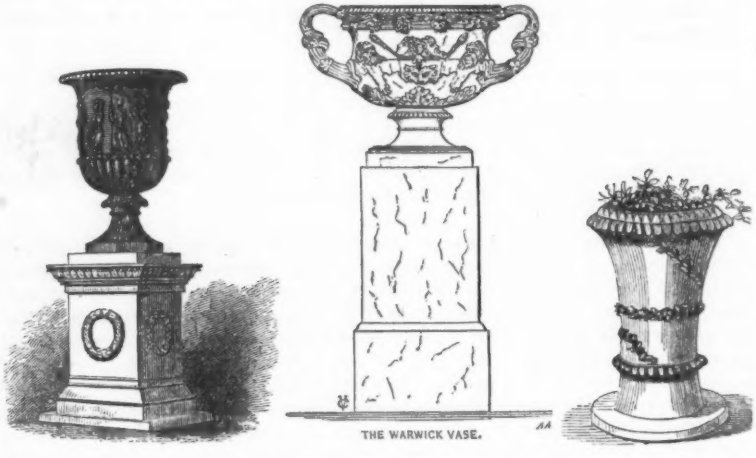
---

Mr. G. C. THORBURN, Newark, N. J., has just received an extraordinary lot of the newest and best Dahlia roots, new Verbenas, new Phloxes, &c. The Geant de Batailles is a marvellous Scarlet Verbena.

---

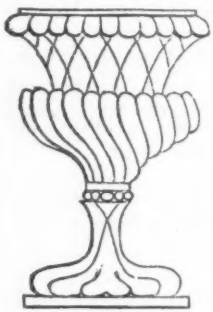
DAVID J. GRISCOM'S nursery of evergreens, shade trees, fruits, vines, roots, &c., at Woodbury, N. J., is within an easy ride of Philadelphia, and offers, at this time, great attractions to purchasers. We recommend the worthy proprietor for his enterprise, and know him to be every way reliable.

VASES FOR GARDENS are beautiful when furnished with fine plants, and when so furnished, there are few objects more chaste or suitable as ornaments to those portions of a garden which are near the house. If filled with plants, they should all be growing, and in high condition, the blooms mingling and clustering thickly in well contrasted colors. The ver-



THE WARWICK VASE.

benas mixed in this way, trail over, and produce a charming effect. Petunias, heliotropes, and other low-growing, half-creeping exotics, are excellent. The dark nasturtium also looks well when partially covering the base with pendent stems and rich blossoms. Geranium, cineraria, calceolaria, noisette roses, orange and lemon-trees, Collinsia, nemophilla, schizanthus, balsam, cockscomb, anemone, and all kinds of bulbs, especially hyacinths, are suitable, though not so desirable as the perpetually blooming plants. The plants should all be grown in pots, and these set in the vases whenever it is desired to change them, which would be the case with hyacinths. The beautiful native, *Mitchella repens* of the woods, makes a good vase and hanging plant. The blue Lobelia is unrivalled.



Very pretty wire baskets and vases are now made to set flower pots in, or for glasses to hold bouquets, of which the accompanying design is a specimen.

"Better hang a wild rose over the toilette," says Leigh Hunt, "than nothing. The eye that looks in the glass will see there something of a right to respect itself, in thinking by how many objects in the creation the bloom of beauty is shared!"

Speaking of breakfast, in summer, the same prince of essayists says: "Set flowers on your table—a whole nosegay, if you can get it, or but two or three, or a single flower—a rose, a pink—nay, a daisy. Bring a few daisies or buttercups from your last field walk, and keep them alive in water, and preserve but a bunch of clover, or a handful of flowering grass (one of the most elegant as well as cheapest of nature's productions), and you have something on your table that reminds you of the beauty of God's creation, and gives you a link with the poets and sages that have done it most honor. Put but a rose,

or a lily, or a violet, on your table, and *you and Lord Bacon* have a custom in common; for that great and wise man was in the habit of having the flowers in season set upon his table morning, noon, and night—that is to say, at all his meals; for dinner, in his time, was taken at noon. And why should he not have flowers at all his meals, seeing that they were growing all day? Now, here's a fashion that shall last you forever, if you please—never changing with silks and velvets, nor dependent upon the caprice of some fine gentleman or lady. The fashion of the garments of heaven and earth endures forever, and you may adorn your table with specimens of their drapery, with flowers out of the fields, and golden beams out of the blue ether."

---

THE WEATHER.—A mild winter, thus far (contrasting most remarkably with the last two), has given opportunity for out-door employments that will greatly facilitate operations in the spring. December was almost unprecedentedly free from hard frost, and January here has been more like a spring month than is remembered for a very long time. On the 11th, we had lightning, and a heavy, warm rain, with the thermometer at 61°, and up to the period when we write (the 21st of January), it has been almost like May.

The following, compiled from the daily papers, will be curious to refer to hereafter:—

| | *Jan. 1, 9 o'clock A. M.* | *14th.* | *15th.* | *16th.* |
|---|---|---|---|---|
| *Chicago.* Clear and mild | 32 degs. | 35 degs. | 31 degs. | 36 degs. |
| *Janesville, Wis.* Clear and mild | 30 " | 25 " | 33 " | |
| *Fulton, Ill.* Pleasant | 26 " | 30 " | | |
| *Prairie du Chien.* Pleasant | 20 " | 22 " | 34 " | |
| *Milwaukie.* Pleasant | 35 " | 32 " | 32 " | |
| *Cairo, Ill.* Cloudy and cool | 30 " | 30 " | 45 " | |
| *Springfield, Ill.* Cool | 40 " | 34 " | | 32 " |
| *Fond du Lac, Wis.* Pleasant and clear | 28 " | 40 " | | |
| *St. Louis.* Mild and clear | 44 " | | 44 " | |
| *Peoria, Ill.* Clear | 35 " | | | |
| *Burlington, Ill.* Mild and clear | 25 " | | | |
| *Rock Island, Ill.* Clear and pleasant | 39 " | | | 25 " |
| *Dubuque, Iowa* | 25 " | 28 " | 36 " | 22 |
| *Pittsburg.* Pleasant and clear | 46 " | 36 " | 42 " | 42 " |
| *Cincinnati, Ohio.* Clear and pleasant | 45 " | 28 " | | |
| *Buffalo.* Clear and mild | 38 " | 28 " | | 37 " |
| *Louisville, Ky.* Clear and cool | 37 " | | 32 " | |
| *Toledo, Ohio.* Cloudy—wind, west | 44 " | | 42 " | 42 " |
| *Columbus, Ohio.* Clear | 44 " | 38 " | 44 " | |
| *Cleveland.* Cloudy—wind, west | 46 " | | 42 " | 36 " |
| *Toronto.* Mild and clear | | | | |
| *Detroit.* Cloudy and windy | 38 " | | 35 " | |
| *Montreal, C. W.* Cold and clear | 44 " | 22 " | | 34 " |
| | (river closed) | | | |

The foregoing is sufficient to record the extraordinary state of things in the middle of January, 1858. Vegetation, in some instances, has made progress, and, in New York city, we hear great complaints from travellers that mosquitos were very numerous in the well warmed hotels.

The Jasminum nudiflora never had, in our latitude, so fine an opportunity to display its winter beauty; the Chimonanthus (winter flower) fragrans rejoiced in the mild season; the Red-bud Maple did its best to show out its blossoms, and, on the whole, we have had an experience which rendered Cuba no longer a necessity.

---

THE last *Flore des Serres* contains, among other things, a well executed view of the opened fruit of *Heliconia bipar*, looking like a great Iris, and one of *Eucharis Amazonica*, a very fine variety of *E. grandiflora*, and a new white flowered Amaryllid.

The Potato Disease has made great progress in England and Ireland, the past season. So convinced of the injurious effects of the potato are some of our physicians, that they have denied their use to children, as liable to create eruptions, and to injure the stomach. It is becoming a serious thing, indeed. We refer the reader to an article on the Chardon potato in the present number.

---

The Great Pear.—A pear was exhibited at the stall of H. Gushee, Washington Market, which was raised on the farm of George Walling, on the Willamette River, a few miles above Portland, Oregon; it weighed four pounds, was eighteen inches round, twenty-one inches in long circumference, and surpassed the great "Beard Pear" by a quarter pound. The account of this pear represents it as having grown upon a graft of the Pound Pear, or, correctly named, the Black Pear of Worcester. The graft was inserted into the White Hawthorn some three years since, and the tree plentifully watered.—*California Farmer.*

---

Bangor, Me.

J. Jay Smith, Esq.—Dear Sir: I am pleased you are giving attention to the *open-air culture* of grapes. The January number is valuable on that account. Samuel Miller's communication is highly interesting, and likewise Daniel S. Dewey's. We here think very highly of the Delaware and Rebecca Grapes. I have a lot (fifty vines of each) which I ordered from G. W. Campbell, Delaware, Ohio, and from Dr. C. W. Grant, of Iona, N. Y. For a common, good, *early* grape, the Hartford Prolific is a highly valuable variety for *Maine*. It is sure to *ripen*. We are planting also the Diana, which is much esteemed everywhere. Probably, the Delaware and Rebecca will outstrip any other two varieties in these parts, at present.

Most sincerely, Henry Little.

---

Seeds by Mail.—Mr. Henry A. Dreer, No. 327 Chestnut St., continues to oblige a large circle of customers by sending choice flower seeds by mail. His catalogue—a very good one—may be had by inclosing a penny stamp, and the selection you make *comes up* directly after he has *planted* the seeds in an envelop, and placed them in that accommodating *ground*, the post-office *window*.

---

Errata.—On page 34, the Alexander Pear, M. Calvin, Esq., should read Mr. Calvin Ely; and *two* years ago should read *twenty*.

---

Answers to Correspondents.—(John Watson, West Farms, New York.) 1. The horse droppings that are used for growing mushrooms ought to be collected from animals that are fed on *dry* herbage, and they should be kept *entirely* free from rain or water while in preparation for receiving the spawn. 2. Succession beds may be spawned from the "beds in crop," by taking a portion of the upper bulk (containing the spawn), and spreading a thin layer over the new bed previous to soiling. The same may be done from a worn-out bed that has been kept dry.

Under the stage of a plant-house is too damp for a mushroom bed, unless extreme caution is used against drip. Imported spawn is most commonly worthless, the rhizoma being often killed by the penetration of the smell of bilge water and damp combined.

(T. T.) The Kentucky Coffee-tree, *Gymnocladus Canadensis*, is usually propagated from seeds, but there is no difficulty in raising it from cuttings of the roots, care being taken, in planting, to keep that end upwards which is naturally so. It is indispensable to every collection—beautiful at all seasons. The flowers of the Judas-tree, *Cercis siliquastrum*, are sometimes fried in batter as fritters, and the flower buds are pickled in vinegar. The same may be said of the Canada Judas-tree, *C. Canadensis*, the young branches of which will dye wool of a nankin color.

(G. S. W.) For early potatoes, we can recommend the walnut-leaved. They are very superior.

J. Jay Smith, Esq.—Dear Sir: Herewith I send you a specimen of *Cuphea eminens*, from a plant that has been in bloom since the end of September. It is one of the new plants of 1857, and pre-eminently an acquisition for winter blooming in either the greenhouse or parlor, and will be a perfectly hardy plant for the Southern States. You will observe that the flowers are in profusion, each one and one-half inch long, and all shades of color from yellow to bright red; the plant is full of foliage, and of easy culture in any rich, sandy loam. R. Buist.

[This is certainly a valuable plant. We received it in 1857, from Mr. Thorburn, of Newark, and noticed at the time its beautiful flowers and foliage.—Ed.]

(Henry C. Blight, Illinois). We have no personal knowledge regarding the "Massachusetts White Grape." The proprietors who advertise it would do well, if it is valuable, to send specimens further south.

*Po'kepsie* must write better verses than he has sent us on the "Hemlock," if he expects to become a poet.

W. H. Reed (Canada West). Your interesting communication on Grape Mildew will be given in our next.

W. C. Strong's article on Wiegelia Middendorfiana, next month.

J. B. Watertown (Mass.). Loudon's Encyclopedias of Gardening and of Plants, are two separate works. The price of McMahon's Gardening is one dollar and a half. Philadelphia: Lippincott and Co.

(J. S. S.) Steam ploughing has not yet been perfected in England. Our people are waiting till it promises greater usefulness and economy, than has yet been attained. There are four patents, and if they could be combined, it is believed something might be effectively done. Wait-a-bit, is the plan here. It is coming.

(M. H. H.) The scarlet Flag is the *Gladiolus Cardinalis*, and we happen to know may be procured of Mr. Buist, Philadelphia, and no doubt of others.

The *New Hop Tree* is simply the *old* one, Ptelia trifoliata.

(S.) Your plants are, 1, Aphelandra Griesbrechii, and 2, Ipomæa bona nox.

(W.) The Australian Ivy, French Ivy, &c. &c., which has been without a name so long, has flowered lately in this vicinity, belongs to the natural order, Compositæ, and is a Senecio, but exactly what the books have not told us. It is a rapid grower, bears parlor heat or a little frost, and, with its beautiful ivy leaf, is a very desirable plant.

(College Hill Subscriber.) We shall endeavor to comply with your request.

---

Catalogues, etc., received.—Catalogue of Fruits and Ornamental Trees, Evergreens, &c. &c., cultivated and for sale at the Hopewell Nurseries, near Fredericksburg, Va. Henry R. Robey, proprietor. This catalogue contains a most valuable list of apples of Southern origin, and will, we trust, receive attention from our numerous Southern readers.

Catalogue of the Gilead Nursery, near Cardington, Monroe County, Ohio. W. B. Lipsey, proprietor. An excellent list.

Catalogue of Fruit and Ornamental Trees, Shrubs, and Plants, &c. By F. Trowbridge, New Haven, Conn. Fourth edition, 1857-8. This contains an essay of value on cranberry culture, and another on the blackberry, from which wine is now made.

Mr. J. C. Thompson, of Tompkinsville, Staten Island, N. Y., sends us a long list of certificates in favor of the Wyandot Prolific Corn, which seems to be worthy of attention.

Catalogue of the Corporation, Officers, and Students, of Hamilton College (New York). There are some good people *there*.

S. Miller's Calmdale Nursery Catalogue, near Lebanon, Lebanon County, Pa. Mr. Miller has a great variety of fruit-trees, and grape-vines, &c.

Catalogue of Fruit and Ornamental Trees, Shrubbery, Vines, Roses, and Greenhouse Plants, cultivated and for sale at the Cherry Hill Nursery, West Chester, Pa. Josiah Hoopes, Proprietor. A very interesting, large, and creditable collection.

Catalogue of Fruit and other Trees, Grape Vines, &c. &c. Cultivated and for sale at the Fruitland Nurseries, by Redmond and Berckmans, Augusta, Georgia. This is the first issue of a catalogue by a firm commencing under uncommonly favorable auspices. Mr. B. is the son of our friend, the well-known pomologist of New Jersey, "L. B.," who transfers to the genial climate of Augusta, those fruits best adapted to the South, and who being devoted to the topic, and filled with information, will give advice to the firm, whose intention it is to build up a first class Southern Nursery; with that view they have mainly propagated the finest varieties of Southern Fruit. Pomology is advancing rapidly in that region.

---

# GOSSIP.

—— Ireland is taking a lead in a movement for the scientific training of agriculturists. A great farm school has been established at Glasnevin, near Dublin.

—— The cook of Louis XVI. was known all over Europe for his mode of serving up eels. His receipt was this: "Take one or two live eels; throw them into the fire. As they are twisting about on all sides, lay hold of them with a towel in your hand, and skin them from head to tail. This method is decidedly the best, as it is the means of drawing out all the oil, which is unpalatable." The consumption of eels as articles of food, throughout Europe, is enormous. In London, the number imported amounts to about ten millions annually; it is food alike for the alderman and the gamin in the streets.

—— In the earliest period of Roman history, every family had its garden, and as little animal food was consumed, it was from this source that the population principally drew its subsistence. Hence, in the laws of the Twelve Tables, the term *hortus* is synonymous to *heredium*, or inheritance; and the word *villa* is nowhere made use of. As a proof, indeed, of the honor paid to gardens by the old Romans, Pliny remarks that men of the highest rank were willing to borrow their names from its contents, as in the Valerian family, and the Lactucarii did not think themselves disgraced by taking their names from the Lettuce. These, however, were mere kitchen gardens, containing such plants and trees alone as were subservient to the daily uses of life; and in Cato's work, the only notice we have of a garden is of this description, although it be true that, according to Pliny, he recommended that plants which could be used for chaplets, should be likewise cultivated in it. In proportion, however, as civilization and wealth increased, a taste for ornamental plants became prevalent; and even in Rome itself, as we are informed by Pliny, it was the fashion of the day, among the lower classes, to have little gardens in the front of their houses, until debarred from that indulgence by the necessity of shutting out the robbers which so abounded in the city.

—— The melancholy scratch of the "Death Watch" (*Anobium*) loses all its terrors when it is known that this ominous sound is not a voice, but the mere result of mechanical friction. You have only to send him a counter-scratch from your side of the wainscot, when, mistaking you for a brother Anobium, he returns the signal. Entomologists declare that they have been able to train Anobia to do this trick at pleasure, by first accomplishing themselves in the accurate mimicry of the sound.

—— Wasps and flies may be caught in graperies by placing several small bottles, containing a mixture of beer and sugar, or molasses, in different parts of the house. The bottles

should be emptied as often as filled with the pests. Fine netting, so fixed that the lights will slide up and down without interruption, will also be a good remedy. Improper ventilation, and a damp atmosphere, are, however, greater evils.

—— Professor Kirtland declares himself, in a letter to the *Ohio Farmer*, an entire convert to the discoveries of the Rev. Mr. Langstroth, in regard to the improvements in hives for bees, and the management of the honey-bee, considering it, beyond question, the true mode. The book of Mr. L. is published by Saxton, New York.

—— The Big Tree Grove, which we formerly announced (says the *California Farmer*), has added to its celebrity another group, discovered by Mr. Galen Clark, who was with us when we measured the first group. The *Mariposa Gazette* tells us that Mr. Clark, who resides at the South Fork, recently, while on a hunting expedition, discovered another group of these trees (eighty-six in number), situated about one mile south of these latter. He had no means of measuring them accurately, but estimates that there is one among the number which will exceed in size any of those previously discovered. According to his enumeration, there are now five hundred and sixty-three comprised in the three groves.

—— The same paper says: "Having written considerable, the present week, upon the value of our fisheries, it would be an omission, on our part, if we did not notice the great fish—a species of bass—which was caught in a seine, at Saucelito, last week. With one exception, it is the largest ever caught on this coast. Its dimensions are as follows: Weight, 187 pounds; length, 6 feet 2 inches; girth of the body, 4 feet 2 inches; girth of the head, 3 feet 4 inches; width of the tail, 2 feet; color of the flesh, reddish-white. The fish was of fine form, and the scales were nearly the size of a quarter of a dollar. It was exhibited and sold at the Washington market."

—— Every parent must have remarked the pleasure which children take in the acquisition of a new brood of chickens. The keeping of these domestic birds calls forth one of the faculties of the young which demands cultivation; but most fathers and mothers are contented when they have provided a pair or two for the instruction of their offspring. This is not enough. The same desire which prompts to observing the new brood, if carried onwards, would make naturalists and accurate observers of insects and birds. One of the most valuable mental acquirements is the power of discriminating among things which differ in many minute points, but whose general similarity of appearance usually deceives the common mind into a belief of their identity. The study of insects, in this point of view, is most peculiarly adapted to youth. In this study, the knowledge of things should go along with that of words. "If names perish," says Linnæus, "the knowledge of things perishes also. To name a plant, or an insect, or a bird, or a quadruped, rightly, is one step towards an accurate knowledge of it, though it is not the knowledge itself. It is the means, and not the end, in natural history as in every other science."

—— Adversity is like the cold March wind which shakes the trees, bending them to the dust, breaking, ofttimes, their groaning boughs, but which loosens the earth at their roots, so that the sap ascends, and the green buds blossom forth.

—— A central spot of the Rocky Mountains ($2\frac{1}{2}^{\circ}$ of latitude by as many of longitude in extent) has the verdure and freshness of high mountains in Europe in summer, the snow and ice remaining late; but very much of this district is one of plateaus in its surface character, and, in its consequences, in every respect sandy, arid, treeless, and saline, in alternating tracts, interspersed, of course, with rich valleys. All the mountains near the Pacific coast are of great altitude, and affect the climate. Between the coast and the first range, the humid atmosphere and warm winter of Western Europe prevail, while, east of that, the change is such as to render it nearly a continental climate, with an atmosphere generally dry, and with variations of temperature similar to those of the Eastern United States. Passing the second range, the change becomes quite extreme from the climate of the coast,

and the country has very few cultivable districts. The northern areas beyond the United States, are very low, on the whole, and the great interior of British America is scarcely above the average altitude of the Mississippi Valley. Thus the great portion of the continent north of us is a low plain, so little elevated as to soften the climate rather than otherwise—a fact of the greatest interest for unborn millions of men.

—— Animals exposed to cold—breathing a colder, and therefore a denser air, containing more oxygen or fuel-burner per cubic foot—animals exposed to cold, requiring, therefore, greater expenditure of fuel to maintain the animal heat—do not, in practice, prosper as if kept in warmth and dryness. Most of their food goes as fuel; a great deal of their food is wasted and burned up within them. Again: Animals allowed to run about and take muscular exercise (thereby increasing the rapidity of respiration, keeping the bellows blowing at the fire within the lungs), do, in effect, not increase in fat or flesh so fast as when kept within bounds, and hindered from running to and fro. In all these particulars, then, the experience of the farmer tallies with the theory of growth as laid down by the chemist and animal physiologist.

—— Hydrangeas of a beautiful blue may be produced, it is asserted, by giving the plants plenty of mould from fir leaves.

## MISCELLANEA.

A Mammoth Squash.—We look to California now, for our big articles, and record to-day, from a late *California Farmer*, a squash at the Exhibition, "by D. S. Campbell. Weight, 264 pounds. Circumference (long way), eight feet. Circumference (short way), seven feet. Was raised by Mr. Asa Vestal, on his farm, one mile from San José. The Committee of the Santa Clara Fair, held at San Jose, last week, decided that there were sixteen hundred pounds of squash growing upon the same vine that bore this. The seed is known as the Camanche variety, native of Northern Mexico; was planted in April, and pulled 17th September. Soil, sandy loam, fourteen feet deep to subsoil, and watered by irrigation."

List of Twenty-Nine Plants to Bloom during Winter in a cool Conservatory.—The blooming will last from November to March:—

Chrysanthemums of sorts.
Scarlet Geraniums.
Flower of the Day, ditto,
Camellias.
Fuchsia Dominiana, serratifolia, &c.
Mignonette, French.
Poinsettia pulcherrima.
Orange-trees.
Salvia splendens and Gesneræflora.
Balsamina (Impatiens) Jerdoniæ.
Daphne Indica.
Ageratums.
Heliotropes.
Linum tigrinum.
Tropæolum Canariense.
Roses of sorts.
Gesnera zebrina.
Primulas.
Pinks.
Epacrises.
Heaths.
Epiphyllums of the Cacti tribe.
Cyclamens.
Wallflowers.
Stocks.
Cytisus.
Calceolarias.
Ardisia carnata; red berries.

Extraordinary Produce of an Apricot-Tree in Guernsey.—An apricot-tree, belonging to Mrs. Allez, of Hauteville, has for many years past given a produce which would be incredible if the fact were not notorious. In the year 1855, this tree yielded no less than 16,000 apricots, and, this year, the produce has been at least 10,000 full-sized and perfectly ripened apricots. The tree (which is, we believe, upwards of forty years old) measures twenty feet in height, and has a span of sixty feet, thus covering a surface of 1,200 feet.—*London Cottage Gardener.*

Baskets for Forwarding Conifers, etc.—The growing of such plants in baskets instead of pots is not a new idea, but it is a good one, as (provided the basket is of some size) the plants can have all the advantage of house room in their young state, and, when desired, can be planted out, basket and all, without the roots being matted into a ball, or somewhat injured by disentangling them, so likely to be the result when plants are continued any time in pots.

---

Feathers.—The poultry fanciers are endeavoring to classify feathers, and give the following descriptions, among a host of others: "A *laced* feather has a narrow border all round its edge, differing in color from the ground color of the feather, but *no* moon on the tip. A *spangled* feather has a moon on the tip, differing from the ground color of the feather, but no border round this. A *pencilled* feather has dark bars in parallel lines across the lighter ground color of the feather. There is neither a spangle at its tip, nor a border round its edge."

# Notes for the Month.

## FEBRUARY.

## VINEYARD CALENDAR.

BY R. BUCHANAN, CINCINNATI, OHIO.

In moderate and dry weather, pruning the vines may be continued throughout this month. In the South, it should be finished. Here, we have nearly a month longer to prune, for the sap in the vine seldom rises before the latter end of March. If it does, we are in danger of frosts nipping the young shoots late in April, or early in May. The method of pruning was stated in the "Calendar" for March last, and also for December, and it is therefore unnecessary to repeat it now. The treatment of the wine after it is racked off, will be the same as recommended last month: "Keep the casks full, and the bungs tight."

Should new plantings be required, this will be a good month to prepare the ground, either by trenching with the spade, or subsoil ploughing. The latter, if done thoroughly, by deep furrows, and then cross-ploughing, is much the cheapest, and, in moderately light soils, will answer nearly as well as trenching.

Cuttings intended for planting in the new vineyard, should be buried in the earth until wanted to set out. New stakes should be charred at the lower end, or coated with coal-tar, to make them last longer in the ground. The careful vine-dresser may also find other jobs to do now that will relieve the pressure of work thrown upon him by the opening of spring.

N. B.—In the "Calendar" for March last, "buds" was printed for *butts*, in cuttings, and "roots" for *frost*, in treating of layers.

BY WILLIAM SAUNDERS.

Manuring (*Gurneyism*).—This term (occasionally met with in agricultural writings) has been applied to a kind of manuring adopted by a Mr. Gurney, in England. The operation consists in covering grass land with straw, coarse hay, or other fibrous matter, under which the grass springs up with astonishing rapidity. A similar practice has for some time been commented upon here as "fall manuring." It has been long observed, that where soil has been covered for a time, it has enriched itself. This has been explained on the supposition that the water of the subsoil, in its upward passage, by capillary attraction, to supply surface evaporation, having in solution various mineral salts, is arrested in its upward progress by a colder substance, where it is condensed, and the mineral ingredients are retained in the surface soil, in a condition immediately available for future vegetation. It would seem, therefore, that the beneficial effects of spreading manure on the surface, and leaving it uncovered, do not proceed so much from the enriching qualities of the manure as from its effects as a simple covering. This is, no doubt, the true solution of the question, for it cannot be doubted that much of the essential properties of manure must be lost by exposure and evaporation. While, therefore, it does not by any means prove that the best method of applying manure is to spread it on the surface, and leave it exposed for months, it is an additional proof of the great utility of mulching; and the principle is a valuable one to

gardeners and fruit cultivators, since it is inexpedient to disturb the soil, and incorporate manure with many of their crops. We learn, further, that when we cover strawberry plants over, the roots of raspberries, fruit-trees, &c., we not only protect from cold, but enhance the productive capacity of the soil, whether the covering be shavings, saw-dust, tan bark, charcoal dust, straw, or farm-yard manure.

Forcing Fruits.—The system of growing grape-vines, and other fruits, in pots and tubs, for early forced crops, presents many advantages over the old method of fruiting plants permanently set out in the soil. The roots are thus equally under the control of the operator, and a uniform and successful crop can with more certainty be insured.

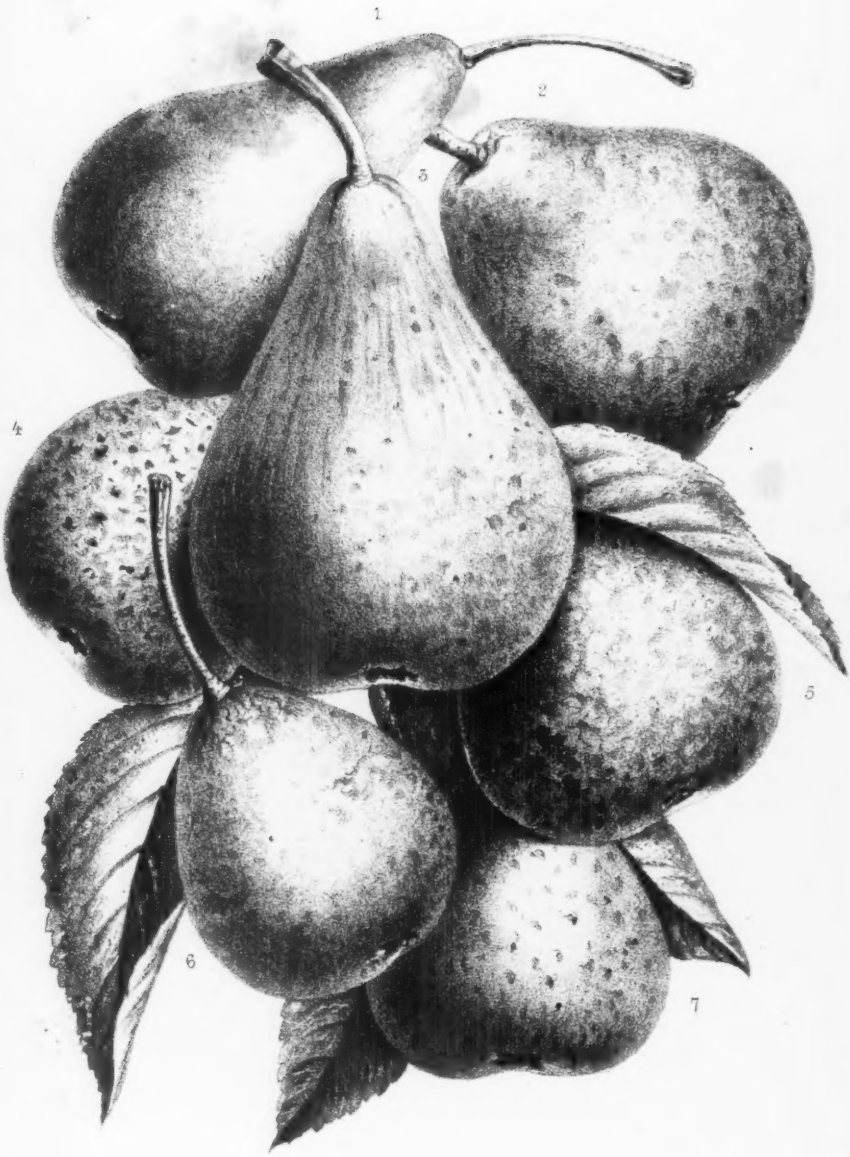
The "Golden Rule" in forcing is *never to be in a hurry*, and to endeavor to imitate somewhat the fluctuations of the external atmosphere; especially allow a reasonable fall of the temperature in the absence of light; the night temperature should fall from 15° to 20° below that of the day in clear, sunny weather. Many failures in forcing are caused by high night temperature, and a mistaken eagerness to keep plants in an artificial instead of a natural condition.

Strawberry plants potted in the fall, will fruit well in a greenhouse, if placed on a shelf near the glass. The hermaphrodite varieties succeed best, as the pistillate do not set freely unless artificially impregnated. Much has of late been written on the subject of sexes in strawberries, but very little of any practical value. It is perfectly in accordance with the teachings of vegetable physiology that single and double, or perfect and imperfect, flowers may be produced on the same plant. The production of wood buds or flower buds is also within the power of the skilled cultivator. Under shelter of these well known botanical laws, assertions have been made that the inconstancy of the strawberry is so great as to render all distinction of sexes worthless. This assertion is simply absurd, as all practical cultivators well know; and it is equally absurd to maintain that changes are impossible.

Grafting Grapes.—The introduction of new and improved varieties of fruits has of late been so great that there are few persons so well supplied with really excellent kinds, that it will not be to their interest to add to their stock. Those who have a superabundance of Catawba or Isabella Grape-vines, will not regret cutting them down and grafting Diana, Delaware, or the Rebecca, on the stock. By doing so, they will obtain strong fruiting plants after one year's growth. The scions should be secured at once, and preserved in a cool, damp cellar; if a dry cellar, they can be kept in a damp mat, or moistened straw. The object is to keep them from growing until the stock puts forth leaves, when it is cut down, and the scions inserted at once. Cleft grafting is the most simple for grapes, and if the stock is cut low enough to cover the graft with soil, failures will rarely occur.

*Greenhouse* plants should always be watered in the early portion of the day. In cold weather, early watering allows excess of moisture to evaporate before evening, and the house will better resist cold. Again: In summer, early watering charges the atmosphere with moisture, and the temperature is kept cool and healthful during the day. A more important reason for the practice arises from the fact that the water, and substances it holds in solution, absorbed by plants during the night, is given off again by their leaves, without benefiting the plant. The leaves must be exposed to the action of light, before the carbonic acid and other matters are decomposed. Light is necessary to the performance of those chemical actions which digest and retain the substances required to develop and extend the plant structure. The amount of water given off by the leaves at night, will of course be altogether dependent upon the hygrometric state of the atmosphere.

Shrubberies.—In arranging pleasure grounds and shrubbery plantations, more especially when the space is of small extent, errors are frequently committed in planting too thickly of the largest growing trees, and however pleasing and effective these may appear while they are young, as they grow up the lower limbs decay, and the plantations present a very artificial appearance. A portion of medium-sized growing trees, judiciously distributed along the margin, and here and there in groups, will eventually give a pleasing and natural looking outline. The following list contains a few of the more available trees of this character: Halesia tetraptera and H. diptera, Anona triloba, Cornus florida and sanguinea, Euonymus latifolia, Amelanchier botriapium, Gordonia pubescens, Ptelea trifoliata, Rhus cotinus, Chionanthus Virginica, Rhamnus catharticus, Viburnum prunifolia, Kölreuteria paniculata, Shepherdia argentea, Eleagnus angustifolia, Cercis canadensis, Cytisus laburnum, Tamarisk Gallica, Syringa vulgaris, Magnolia glauca, M. conspicua, Viburnum opulus, Acer Pennsylvanica, Carpinus Americana, Celtis occidentalis, Mimosa Julibrissin, Laurus sassafras, and Maclura aurantiacum. If you wish to trim or torture a plant into shapes, the latter is so rapid a grower that you may have large columns, pyramids, &c. &c., in a very short time.




A. GROUP OF SUMMER FRUIT

1. Rostiezer 2. Madelaine 3. Beurre Giffard 4. Mannings Elisab$^{h}$ 5. Bloodgood,
6. Dearborn 7. B$^{e}$ Haggerston (or Limon.)